

Environmental Assessment
Replace Sanitary Sewer
from Building 801 to Lagoons
at Grand Forks AFB, North Dakota



Prepared by
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14. ABSTRACT This EA has been prepared in accordance with the National Environmental Policy Act of 1969, Council on Environmental Quality and Air Force Environmental Impact Analysis Process, to assess the potential environmental impacts to replace sanitary sewer force main pipe from Building 801 to the lagoons in Grand Forks County, North Dakota. Relevant resource areas analyzed in the EA include Air Quality; Noise; Wastes, Hazardous Materials and Stored Fuels; Water Resources; Biological Resources; Socioeconomic Resources Cultural Resources; Land Use; Transportation Systems; Airspace/Airfield Operations; Safety and Occupational Health; Environmental Management; and Environmental Justice. In addition to the Proposed Action, the Alternative Action and the No Action Alternative were analyzed in the EA. The EA also addresses the potential cumulative effects of the associated activities along with other concurrent actions at Grand Forks AFB and the surrounding area.					
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**FINDING OF NO SIGNIFICANT IMPACT AND
FINDING OF NO PRACTICABLE ALTERNATIVE**

**REPLACE SANITARY SEWER MAIN (BUILDING 801) TO LAGOONS
AT GRAND FORKS AIR FORCE BASE, NORTH DAKOTA**

Federal actions that potentially involve significant impacts on the environment must be reviewed in accordance with the National Environmental Policy Act (NEPA) and all other applicable laws. The United States Air Force (USAF) has completed an Environmental Assessment (EA) to address the potential environmental consequences of the Proposed Action and Alternatives for replacement of the sanitary sewer force main pipes from the main gate lift station at Building 801 to the lagoons at Grand Forks Air Force Base (AFB), North Dakota. The EA is attached to this Finding of No Significant Impact (FONSI) and Finding of No Practicable Alternative (FONPA) document and is incorporated by reference.

Purpose and Need for Proposed Action: This action to replace the sanitary sewer force main pipes is proposed to simplify maintenance requirements and reduce infrastructure repair costs. The Proposed Action is needed to replace the pipe with a more durable and cost-effective material. Emergency repairs were performed three times in 2009 alone. The existing 53-year-old transite pipe force main suffers from durability cracking and is beginning to develop leaks. If no action is taken, the transite piping may ultimately fail, causing large releases of raw sewage into the environment.

Description of Proposed Action and Alternatives: The No Action Alternative would leave the existing sanitary sewer in place. Inadequate sewage disposal protection, per Environmental Protection Agency (EPA) and State of North Dakota standards, would likely occur if the existing sanitary sewer were to continue operation. Infrastructure improvements to repair the inefficient and inadequate utilities and correct current deficiencies would not be initiated. Adverse health effects of exposure to sewage include tetanus, hepatitis A, and parasites. Under this alternative, the utility would require higher funding levels each year to maintain and operate the sewer line. In addition, increased risks to the environment would be expected to occur due to biological risks resulting from sewer leaks.

Grand Forks AFB has identified a project to replace the sanitary sewer force main pipes from the main gate lift station (Building 801) to the lagoons. The pipes follow the north edge of the road, 19th Avenue Northeast, where a wetland ditch is located. Because the area leading to the lagoon is surrounded mainly by wetlands and a road, there is no practicable alternative to siting the replacement pipe within these small roadside wetlands.

At the entrance areas to Building 801 and Lagoon Cell #1, the transite pipes will be cut for removal and installation of new sewer pipe and valves. Because cutting the transite will potentially release fibers, pipes in these areas will be treated as friable asbestos and disposed of as asbestos-containing material (ACM) at a permitted landfill in accordance with federal, state, and local regulations. The ends of the pipes will be encapsulated with a layer of cement, and the remaining pipe will remain in the ground as Category II non-friable asbestos as long as it

remains intact and releases no fibers. Geographic Information System (GIS) data and as-builts for both the new and old sewer pipe will record the locations for current and future activities on the sewer pipe.

The Proposed Action includes the need for an additional 167 feet of temporary construction easement on the north side of the road, 19th Avenue Northeast, in addition to the existing 33 foot easement in place. This easement is required on a privately owned piece of land approximately 1780 feet from the east edge of military housing area to the west edge of the lagoons. This temporary construction easement is needed to allow room to store dirt, operate backfill, and for other construction activities to take place.

The Proposed Action includes the purchase of an additional 7 feet of permanent easement for access during future maintenance. This makes the easement 40 feet from the centerline of the roadway instead of the existing 33 foot easement in place. The length would be 1780 feet on the north side of the roadway, 19th Avenue Northeast with a total easement area of 0.29 acres. The landowner will be paid by the government for the permanent easement, as negotiated with the United States Army Corps of Engineers (USACE). The landowner would still be able to farm the land, with the understanding that the Base would have access to it if maintenance work is required in the future on the force mains.

Alternative Action 3 is removing both the existing 8-inch and 10-inch force main pipes currently serving the sanitary sewer. It proposes to remove both lines from the end of the Sunflake military housing area to the valves south of Lagoon Cell #1, which is approximately 3,645 feet. Existing mains must remain in service because disturbing either main risks failure of the sewer system. Therefore, this alternative was evaluated as less feasible. Because the existing mains contain transite, there are environmental disposal rules and costs involved. It would also increase the amount of asbestos-containing transite by 80 percent, to be disposed at a landfill permitted to accept ACM. This alternative would allow the lines to be placed in the existing 33 foot easement without obtaining an additional 7 feet from the landowner. The project would require additional time and funding for completion of the project.

Summary of Environmental Consequences: Under the No Action Alternative, there would be no change to the baseline conditions for the resources evaluated. If no action is taken, the potential for releases of raw sewage to the environment will increase due to sewer pipe failures.

Air Quality: Implementation of the Proposed Action and Alternative Action would have temporary, insignificant impacts from short-term emissions of pollutants from mobile sources, equipment, and vehicular traffic. Best Management Practices (BMPs) to reduce fugitive emissions, such as watering disturbed areas and wetting the ACM pipe with a fine mist of amended water prior to cutting and removal and wrapping in a 6-mil polyethylene bag, would be implemented to reduce the amount of these emissions. No significant impacts to air quality would result because of construction activities. As the region is in attainment status for all criteria pollutants and not under an air quality maintenance plan, no Conformity Determination is required before proceeding with any alternative.

Noise: Significant impacts from noise would not be expected. There are no sensitive noise receptors (e.g., residential areas, hospitals, churches) within 4,000 feet of the project areas. Noise levels will be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working condition and ensuring that construction and demolition activities are not conducted during early morning or late evening hours. Short-term impacts associated with construction activities would be insignificant, temporary (an estimated 100 days), and cease at the completion of these activities.

Wastes, Hazardous Materials, and Stored Fuels: Short term minor adverse impacts to solid waste are expected as a result of the Proposed Action, with the removal, handling, and disposal of asbestos-containing materials which must be removed and disposed of in accordance with environmental laws and regulations. Provided BMPs are followed, significant impacts to hazardous materials and waste management, solid waste management, installation restoration program sites, and lead-based paint abatement are not expected.

Water Resources: Short term minor adverse impacts could occur as a result of implementation of the Proposed Action. Along the south edge of the lagoon primary cell is a 0.07 acre roadside wetland ditch (#LS-05), as determined by delineation. Excavation for aging pipe removal and replacement will take place directly in this ditch and will directly impact this roadside wetland. Excavation affecting this small ditch-wetland shall be addressed by bringing the original ditch elevation back to grade so that no permanent fill of the ditch shall remain. Removed vegetation shall be reseeded at the projects end, and drainage will convey surface water runoff.

To the southwest of Lagoon Cell #1 is a 3.4 acre wetland area (#LS-04). The existing transite pipe will be abandoned in place, and two new parallel lines of PVC pipe shall be installed by trenching 10 feet wide and 12 feet deep very close to wetland site. The 3.4 acre wetland shall be staked and flagged around the perimeter to notify construction personnel not to enter the site so as to avoid wetland impacts, although it is anticipated that a 0.05 acre area will be impacted, as estimated by the US Corps of Engineers. The construction site has potential for heavy equipment and excavation efforts to affect wetlands by unintentional discharge. Silt fencing in this area shall be installed around the construction zone to prevent discharge to the 3.4 acre wetland and to the adjacent drainage ditch leading to east of the lagoons.

Short-term impacts to water resources would be avoided or minimized through implementation of BMPs, such as silt fences and traps, detention basins, buffer strips, or other features used in various combinations, (i.e., erosion control measures), as part of the Proposed Action. Proper stabilization and seeding the site immediately upon completion of the construction would provide beneficial vegetation and control erosion. Provided BMPs are followed, there would be insignificant impacts on stormwater, surface water, wastewater, water quality, and floodplains. Because of the extent of the wetland within the ditch and the proximity to storm sewer pipe, the project cannot avoid directly impacting wetlands.

Application for a Section 404 permit was made to USACE. The section 404 permit was returned from USACE regarding the sanitary sewer force main project. The Corps made a preliminary determination that the project-affected wetlands are jurisdictional. The Corps determined that each wetland affected is considered a project, and because the affected acreage of each wetland is less than 1/10th of an acre, the Base does not have to mitigate under Nationwide Permit #12.

Any jurisdictional wetland over 1/10th requires mitigation. The Base also is not required to submit a preconstruction notification, as it does not qualify under any of the listed criteria shown on page 2 of the Nationwide Permit #12 factsheet in Appendix D of the EA. The nationwide permit has several BMPs the Base is required to follow, and these are listed in the permit.

Base engineers must ensure that the eventual contractor follows the BMPs in the permit. When the project is complete, the Base is required to sign the Nationwide Permit, detail what was done to follow the BMPs in the permit, and return the permit within 30 days of project completion. If the Base should deviate from the project, additional authorization is required. At project's completion, the Base engineers will describe all the activities completed in the return package to the Corps.

Biological Resources: BMPs and control measures, including silt fences, storm drain covers, covering of stockpiles and keeping construction equipment in construction areas, would be implemented to ensure that impacts to biological resources be kept to a minimum. Disturbed areas should be re-established as soon as possible. BMPs would be required to prevent the spread of noxious weeds, minimize soil erosion, and promote the establishment of native plant species. Due to the mobility of wildlife species present at this location and the profusion of similar landscaped areas in the general vicinity, any wildlife disturbed would be able to find similar habitat in the local areas. No impacts to federally threatened and endangered species are anticipated. Construction would have insignificant impacts to vegetation, wildlife, and State-threatened and endangered species.

Socioeconomic Resources: The Proposed Action would not involve relocation of personnel to the region of influence; therefore, no change to the population would be expected. The economic benefits would be local and short-term with no permanent employment positions created. The implementation of the Proposed Action, therefore, would provide a short-term, beneficial impact to local economy during the construction project.

Cultural Resources: There are no eligible or potentially eligible National Register of Historic Places (NRHP) archeological sites, nor potentially eligible NRHP Cold War buildings in the vicinity of the sanitary sewer project. Coordination with the State Historical Society of North Dakota for a "No Historic Properties Affected" determination was completed. In the unlikely event any archaeological artifacts are discovered during the construction of the sanitary sewer, the operator or contractor would be instructed to halt operations and immediately notify the Grand Forks AFB Cultural Resource Manager who would notify the State Historic Preservation Officer. No significant impacts to cultural resources are anticipated because of construction activities.

Land Use: The proposed construction would not change the land use, since the area is primarily designated for industrial operations. The Proposed Action has no adverse impact to land use. The private landowner of the adjacent property would still be able to farm the area occupied by the 0.29 acre easement, with the understanding that the landowner would be reimbursed by the Base which may need access if future maintenance work needs to be done on the force mains.

Transportation Systems: The Proposed Action would have insignificant adverse impact to transportation systems on Base due to vehicles traveling to and from the construction site in the area around Building 801 to the lagoons. The site would provide direct access to the sanitary sewer force main, and there is minimal traffic along the township road in the construction area.

Airspace/Airfield Operations: The Proposed Action would have no impact to aircraft safety and airspace compatibility. The location of the proposed sanitary sewer replacement is 2 miles east of the airfield.

Safety and Occupational Health: The replacement of sanitary sewer force main pipe would resolve potential health issues related to sanitary sewer leakage and potential asbestos in the existing force main. Participants in the construction are required to wear appropriate personnel protective equipment for protection from exposure to bacteria, parasites, and ACM. Any excavation in this area needs to be reviewed by the Base Bioenvironmental Engineer for worker protection. Implementation of the Proposed Action would result in long-term benefits to personnel health and safety by improving the working conditions of the sanitary sewer. Provided BMPs are followed, the Proposed Action would have positive long-term impact on safety and occupational health.

Environmental Management: The soils in the project areas have been previously disturbed by development for sanitary sewer pipe. No long-term, significant impacts would be expected following grading and revegetation in the project areas. Provided BMPs are followed, the Proposed Action would not impact Installation Restoration Program sites, geology or soils over the long term.

Environmental Justice: Executive Order (EO) 12898 requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. There are no minorities or low-income populations within or immediately adjacent to the area of the Proposed Action or Alternatives, and thus, there would be no disproportionately high, significant, or adverse impact on such populations.

Cumulative Impacts: The potential adverse impacts to resources of interest in this EA are short term and minor. Based upon this impact to wetlands, a Section 404 Clean Water Act permit was obtained and two jurisdictional wetland resources were identified by USACE. Excavation affecting these small ditch-wetlands shall be addressed by bringing the original ditch elevation back to grade so that no permanent fill of the ditch shall remain. Removed vegetation shall be reseeded at the project's end to allow site to restore to wetland. Overall, the analysis for this EA indicates that replacement of the sanitary sewer will not result in, or contribute to, significant, adverse, cumulative impacts to resources on Grand Forks AFB, Grand Forks County, or the state of North Dakota.

Public Review and Interagency Coordination: The Draft EA and Draft FONSI/FONPA were furnished to the agencies listed in Section 6.0 of the EA and were made available at the Grand Forks AFB public web site. A Notice of Availability was published in the Grand Forks Herald on 10 and 12 August 2010. The Grand Forks AFB web site carried the Notice from 10 August

2010 to 12 September 2010. All interested agencies, groups, and persons were invited to submit written comments on the Draft FONSI/FONPA and EA. There were no public comments. None of the agency comments required changes to the Proposed Action or environmental consequences in the EA.

The Draft FONSI/FONPA and EA were also furnished to the agencies listed in Section 6.0 of the EA. None of the agency comments required changes to the Proposed Action or environmental consequences in the EA.

Findings

FONPA

Due to the location of a wetland area in a narrow ditch between the lagoon and road, I find that there is no practicable alternative to completing the Proposed Action within wetland areas, pursuant to EO 11990, the authority delegated by the Secretary of the Air Force Order 791.1, and in consideration the information contained herein and in the attached EA. The Proposed Action, as designed, includes all practicable measures to minimize harm to wetlands.

FONSI

Based on the information and analysis presented in the EA conducted in accordance with the requirement of NEPA, the Council on Environmental Quality Regulations, implementing regulations set forth in Title 32, Code of Federal Regulations, Section 989, *Environmental Impact Analysis Process*, as amended, and after a review of the agency comments submitted, I conclude that implementation of the Proposed Action would not result in significant impacts on the quality of the human or natural environment. For these reasons, a FONSI/FONPA is approved, and preparation of an Environmental Impact Statement is not warranted. This decision has been made after taking into account all submitted information and considering a full range of practical alternatives that would meet project requirements and are within the legal authority of the USAF.



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SES, DAFC
Deputy Director, Installations and
Mission Support

24 SEP 2010

Date

Attachment: EA, Sep 10

Cover Sheet

Agency: United States Air Force (USAF), 319 Civil Engineer Squadron

Action: Replace Sanitary Sewer Force Main Pipe from Building 801 to Lagoons at Grand Forks Air Force Base (AFB or Base), North Dakota.

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Designation: **Environmental Assessment (EA)**

Abstract: This EA has been prepared in accordance with the National Environmental Policy Act of 1969, Council on Environmental Quality and Air Force Environmental Impact Analysis Process, to assess the potential environmental impacts to replace sanitary sewer force main pipe from Building 801 to the lagoons in Grand Forks County, North Dakota. Relevant resource areas analyzed in the EA include Air Quality; Noise; Wastes, Hazardous Materials and Stored Fuels; Water Resources; Biological Resources; Socioeconomic Resources; Cultural Resources; Land Use; Transportation Systems; Airspace/Airfield Operations; Safety and Occupational Health; Environmental Management; and Environmental Justice.

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ACRONYMS, ABBREVIATIONS and TERMS

AAM	Annual Arithmetic Mean
AC	Alternating Current
ACG	Architectural Compatibility Guidelines
ACM	Asbestos Containing Material
AF	Air Force
AFB	Air Force Base
AFI	Air Force Instruction
AFOSH	Air Force Occupational Safety and Health
AICUZ	Air Installation Compatible Use Zone
aka	also known as
AMC	Air Mobility Command
APZ	Accident Potential Zone
ARPA	Archeological Resource Protection Act
ARW	Air Refueling Wing
AST	Above Ground Storage Tank
ATC	Air Traffic Control
AT/FP	Antiterrorism Force Protection
ATR	Air Traffic Radio
Ave	Avenue
AWWA	American Water Works Association
BASH	Bird Aircraft Strike Hazard
Bldg	Building
Blvd	Boulevard
BMP	Best Management Practice
BMX	Bike Motocross
BOD	Biochemical Oxygen Demand
BRAC	Base Realignment and Closure
BTU	British Thermal Unit
CAA	Clean Air Act
CATM	Combat Arms Training and Maintenance
CDC	Child Development Center
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CES	Civil Engineer Squadron
CEV	Environmental Management Flight
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CRP	Conservation Reserve Program
CWA	Clean Water Act
dB	decibel
dBA	Decibels Adjusted
DNL	Day-Night Average A-Weighted Sound Level
DoD	Department of Defense

EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EQSD	Explosive Quantity Siting Distance
ERP	Environmental Restoration Program
ESA	Endangered Species Act
Etc	etcetera
F	Fahrenheit
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
ft	Feet
ft ³ /s	feet cubed per meter
FW	Fighter Wing
GATR	Ground-to-Air Transmitter and Receiver
GFAFB	Grand Forks Air Force Base
GPP	Green Procurement Program
HAP	Hazardous Air Pollutants
hr	Hour
HCA	Hazardous Cargo Area
HM	Hazardous Material
H ₂ S	Hydrogen Sulfide
HVAC	Heating, Ventilation and Air Conditioning
HW	Hazardous Waste
IAW	in accordance with
IRP	Installation Restoration Program
INRMP	Integrated Natural Resources Management Plan
KV	Kilovolt
KVA	Kilovolt-Ampere
LBP	Lead base paint
LT	Long-Term
LEED	Leadership in Environmental and Energy Design (US Green Building Council)
MBTA	Migratory Bird Treaty Act
MFH	Military Family Housing
MILSTD	Military Standard
mph	Miles Per Hour
MSDS	Material Safety Data Sheet
MSA	Munitions Storage Area
MSL	Mean Sea Level
µg/m ³	Micrograms Per Meter Cubed

MUX	Multiplex(er)
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
ND	North Dakota
NDAAQS	North Dakota National Ambient Air Quality Standards
NDAC	North Dakota Administrative Code
NDDH	North Dakota Department of Health
NDPDES	North Dakota Pollutant Discharge Elimination System
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Act
NHPA	National Historic Preservation Act
NO _x	Nitrogen Oxides
NO ₂	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRHP	National Register of Historic Places
NWP	Nationwide Permit
NWR	National Wildlife Refuge
O ₃	Ozone
QD	Quantity Distance
OSHA	Occupational Safety and Health Act
OWS	Oil Water Separator
P2	Pollution Prevention
Pb	Lead
PCS	Petroleum-Contaminated Soil
PEM	Palustrine Emergent Wetland
PM ₁₀	Particulate Matter 10 Microns in Diameter
PM _{2.5}	Particulate Matter 25 Microns in Diameter
POL	Petroleum Oil Lubricant
PPE	Personal Protective Equipment
ppm	Parts Per Million
PSD	Prevention of Significant Deterioration
QA/QC	Quality Assessment and Quality Control
RACM	Regulated Asbestos Containing Materials
RCRA	Resource Conservation and Recovery Act
RCS	Report Control Symbol
RH	Relative Humidity
RI/FS	Remedial Investigation/Feasibility Study
ROI	Region of Interest
RPA	Remotely Piloted Aircraft
RV	Recreational Vehicle
SAGE	Strategic Air Ground Equipment
SAIC	Science Applications International Corporation

SARA	Superfund Amendments and Reauthorization Act
SATAF	Site Activation Task Force
SF	Square Feet
SNG	Synthetic Natural Gas
SO ₂	Sulfur Dioxide
SO _x	Sulfur Dioxide
St	Street
ST	Short-Term
SWMU	Solid Waste Management Unit
TO	Technical Order
tpy	Tons Per Year
TSCA	Toxic Substance Control Act
TSI	Thermal System Insulation
UAS	Unmanned Aircraft System
UHF	Ultra High Frequency
UND	University of North Dakota
UPS	Uninterruptible Power Supply
US	United States
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USFWS	United States Fish and Wildlife Service
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound
VHF	Very High Frequency
WMA	Wildlife Management Area
WPA	Works Progress Administration

EXECUTIVE SUMMARY

Proposed Action

The 319th Civil Engineer Squadron (CES) of the United States Air Force (USAF) proposes to replace 7,500 LF of sanitary sewer force main on Grand Forks Air Force Base (AFB or the Base), North Dakota. Grand Forks AFB encompasses 5,773 acres of land in the central portion of Grand Forks County in eastern North Dakota.

Purpose and Need

The purpose of the proposed new sanitary sewer is to replace the sanitary sewer force main from the main gate lift station (Building 801) to the lagoons.

This action is proposed to simplify maintenance requirements and reduce infrastructure repair costs of the sewer main. The Proposed Action is needed to replace the pipe with a more durable and cost effective material. Emergency repairs were performed three times in 2009 alone. The existing 53 year old transite pipe force main suffers from durability cracking and is beginning to develop leaks. If no action is taken, the transite piping may ultimately fail, causing large releases of raw sewage to the environment.

Replacement of the sanitary sewer force main pipe would remove outdated infrastructure that represents sources of potential contamination, such as sanitary sewage containing bacteria and parasites. Removal of the aging pipe would allow funds now expended on maintenance and repairs to be used more efficiently on functioning utilities.

The Proposed Action includes the need for an additional 167 feet of temporary construction easement on the north side of the road, 19th Avenue Northeast, in addition to the existing 33 feet easement in place. This temporary construction easement is needed to allow room to store dirt, operate backfill and for other construction activities to take place.

The Proposed Action includes the purchase of an additional 7 feet of permanent easement for the placement of two new sanitary sewer pipes on the north side of the existing pipe. This makes the easement 40 feet from the centerline of the roadway instead of the existing 33 feet easement in place. The length would be 1780 feet between stations 29+10 and 46+90 on the north side of the roadway, 19th Avenue Northeast. This length is from the east edge of the military housing area to the western edge of the lagoons. This amounts to 0.29 acre of additional easement. The landowner would still be able to farm the land, with the understanding that the base would have access to it should maintenance work need to be done on the force mains in the future.

Alternatives Considered but Eliminated for Detailed Study

An alternative considered was to install the new main force main to the south of the existing 8 inch force main within the existing easement. This would place the new main right on the edge of the roadway, 19th Avenue NE, and in some places, on the roadway itself. See Figure 1.7. There is 13.16 feet from the edge of the roadway to the centerline of the existing 8 inch force main. The base cannot excavate within 5 feet of the existing force mains as the pipe is fragile and it takes the chance of the lines breaking or moving during the proposed placement. If the base takes that dimension out of the 13.16' minus 6' (centerline to centerline), it leaves 7.16' minus the 6.16' wide trench as shown in the plan. There would be 1' from the edge of the roadway. This would cause the ground to become unstable causing portions of the road to cave into the trench during construction. The roadway would need to be closed during construction to allow work activities to take place. A trench 10' deep paralleling the edge of the roadway would be unsafe to have traffic using the road.

Description of Proposed Action and Alternatives

Alternative 1 - No Action Alternatives - Status Quo

The No Action Alternative would be to not replace the sanitary sewer and would leave the existing sanitary sewer in place. If no action is taken, the transite piping may ultimately fail and emergency repairs may need to be made to prevent releases of raw sewage to the environment. Inadequate sewage disposal protection per Environmental Protection Agency (EPA) and State of North Dakota standards would likely occur if the existing sanitary sewer were to deteriorate further. Infrastructure improvements to improve the effectiveness of the Base's mission, replace inefficient and inadequate utilities, and correct current deficiencies would not be initiated. Adverse health effects of exposure to sewage include tetanus (caused by a toxin produced by bacteria common in soil and sewage), leptospirosis (caused by a parasitic worm), hepatitis A, and parasites such as giardia and cryptosporum. Under this alternative, the utility would require higher funding levels each year to maintain and operate the sewer line. In addition, increased risks to the environment would be expected to occur due to biological risks resulting from sewer leaks.

Alternative 2 - Proposed Action

Grand Forks AFB proposes to replace the sanitary sewer force main from the main gate lift station (Building 801) to the lagoons. The base proposes to replace two existing 8" and 10" transite force main lines of 100 weight transite pipe (7,500 LF) with new dual 10" C-900 PVC pipe from Building 801 to the lagoons directly east of the main gate. This route will follow the existing force main, with the new pipe being placed just north of the old in a single trench. The project will provide air relief valves where required. The contractor will backfill and compact the area to provide site restoration, including minor fencing, landscaping, seeding and sodding. Approximately 877 LF of the transite piping, near the exit and entrance sites, an estimated 129,000 pounds, will be handled and disposed as asbestos-containing material (ACM) in accordance with State, Federal, and local regulations. The remaining estimated 6,623 LF will be abandoned in place in accordance with State, Federal, and local regulations. The alignment will include two directional borings that cross 25th Street NE. The design will require bypass pumping of the existing 8" line and existing 10" line during construction. Construction phasing can shorten the bypass pumping time, however it is the goal of this project to maintain service in two lines at all times. High voltage electrical relocation will need to be completed near the lift station. Grand Forks AFB has identified the straddle project as #JFSD200803.

Approximately 50 feet will be removed from the Pump Building 801 going east and approximately 827 feet will be removed from the east side of 25th Street to the east towards the lagoon. The 8" and 10" sewer pipes are in 10 foot sections connected by a sliding coupling. These areas are at greater risk to become "friable" and release fibers into the air when new pipe and valves are installed and old pipe is cut for removal. The asbestos abatement contractor will excavate, enclose in two 6-mil polyethylene bags and provide a trench box for removal of the transite pipe. The waste shipment record will be provided to the Base before ACM is removed from site and within 35 days after receipt by the landfill. The contractor must develop and implement a written Asbestos Removal and Disposal Plan. Proof of disposal will be accomplished in accordance with 40 CFR 61 Subpart M, NDAC 33-15-13-0215e, and the specifications of the contract. Exposed edges of asbestos pipe to remain will be encapsulated with a ¼ inch thick layer of nonasbestos insulating cement troweled to a smooth, hard finish. The existing transite, asbestos-cement, can remain in place as non-friable ACM, as long as it does not crumble or reduce to powder. The existing sanitary sewer pipe is recorded in the Base GIS records and as-built drawings. As part of the planning, the Base pot-holed to verify the locations of the existing pipe. The as-builts and GIS records will remain on file as long as the pipe remains in the ground. The new pipe will be wired with a

continuous length of tracer wire for the full length of each run of nonmetallic pipe on the top of each pipe. The contractor shall use *survey grade* GPS to collect and provide data to be overlaid onto the installation's orthophotograph and Base map. GIS data will provide locations for future activities on both the old and new sewer pipe.

Along the southwest edge of lagoon primary cell one is a 3.4 acre wetland area #LS-04. Along the west edge of the lagoon primary cell one is a 47 acre large palustrine/lacustrine wetland system #LS-02 with open water on the north end. Along the south edge of the lagoon primary cell one is a 0.07 acre roadside wetland ditch #LS-05. Prior to construction, the contractor will stake and flag the existing wetlands. Stakes are to remain in place until construction is complete. No activities in the wetland #LS-02 are permitted during construction; however 0.05 acre of #LS-04 is anticipated to be impacted. Excavation will take place directly in #LS-05 and will directly impact this roadside wetland of 0.07 acre. Vegetation would be disturbed during pipe replacement, but long term impacts would be minimal as the area naturally reverts to wetland vegetation after site restoration with appropriate wet meadow forbes and grass seed. Because the area leading to the lagoon is relatively surrounded by wetlands and a road, there is no practicable alternative to siting the replacement pipe within these roadside wetlands.

The Proposed Action includes open excavation of the site at a distance approximately 40 ft from the center of the road. Excavation will include use of heavy equipment such as bulldozers trenching 10 ft wide and 12 ft deep. Near the lagoons by the small wetlands, the work includes removal and replacement of existing sanitary sewer force main of transite pipe. The pipe replaced shall be made of PVC material. Near the 3.4 acre wetland site, the existing transite pipe will be abandoned in place, and two new parallel lines of PVC pipe shall be installed. The 3.4 acre wetland (#LS-04) shall be flagged around the perimeter to notify construction personnel not to enter the site so as to avoid wetland impacts; however, based on US Army Corps of Engineers determination, it is anticipated that 0.05 acre may likely be impacted. Potential impacts to wetlands adjacent to the site would be minimized through use of erosion control best management practices. Typical erosion control measures such as silt fence and ditch checks would be used to prevent the release of construction site sediment to adjacent wetlands and drainage ditch. Silt fencing in this area shall be installed around the construction zone to prevent discharge to the 3.4 acre wetland and to the adjacent drainage ditch leading to Kellys Slough National Wildlife Refuge. The 0.07 acre wetland ditch (#LS-05) that is adjacent to the lagoons requires complete excavation to replace the aging pipe. Excavation affecting this small ditch-wetland shall be addressed by bringing the original ditch elevation back to grade so that no permanent fill of the ditch shall remain. Removed vegetation shall be reseeded at the project's end.

Alternative 3 – Alternative Actions

An alternative action considered is removing both the existing 8 inch and 10 inch force main pipes currently serving the sanitary sewer. To remove both lines from the end of the Sunflake military housing area to the valves south of lagoon #1, which is approximately 3,645 feet, would cost an estimated \$300,000. Existing mains contain transite, and are subject to environmental disposal rules. This alternative would add additional time and costs to the project. It would require a trained asbestos removal supervisor and worker on site at all times. It would increase the amount of asbestos containing transite by 80% to be disposed at an asbestos approved landfill. This alternative would follow the same path as the Proposed Action and would involve the same wetlands. Existing mains must remain in service. Disturbing either one risks failure of the system.

Impacts by Resource Area

Insignificant impacts would be expected from implementing the Proposed Action. For the purposes of this project, short-term uses of the environment include direct construction-related disturbances occurring over the projected 100-day timeframe (or slightly longer) for the project. Long-term uses of the human environment include those impacts occurring after construction activities area completed. If the project was not constructed, existing uses would continue with greater risk each year. Under the No Action Alternative, there would be no change to the baseline conditions for the resources evaluated.

Air Quality - Implementation of the Proposed Action would have temporary, insignificant impacts from short-term emissions of pollutants from mobile sources equipment and vehicular traffic. Best management practices (BMPs) to reduce fugitive dust emissions, such as watering disturbed areas and roads and wetting the ACM pipe with a fine mist of amended water prior to cutting and removal and wrapping in a 6-mil polyethylene bag, would be implemented to reduce the amount of these emissions. As the region is in attainment status for all criteria pollutants and not under an air quality maintenance plan, no Conformity Determination is required before proceeding with any alternative.

Noise - Significant impacts from noise would not be expected. There are no sensitive noise receptors (e.g., residential areas, hospitals, churches) within 4,000 feet of the project areas. Noise levels will be minimized by wearing hearing protection, ensuring that construction equipment is equipped with a recommended muffler in good working order and ensuring that construction and removal activities are not conducted during early morning or late evening hours. Short-term impacts associated with construction activities would be insignificant, temporary and cease at the completion of these activities.

Wastes, Hazardous Materials and Stored Fuels - The increase in hazardous and solid wastes from construction of a new sanitary sewer and removal of portions of sanitary sewer would include an estimated 129,000 pounds of debris. Solid waste debris would be disposed in an approved location, such as the Grand Forks Municipal Landfill fifteen miles east of the base. Inert construction debris would be disposed at an approved location, such as the inert landfill, permit number IT-198, four miles northeast of the base. The prime contractor and the asbestos abatement contractor will be responsible for compliance with all asbestos related Federal, State, and local regulations including OSHA-related requirements. ACM must be removed and disposed of in accordance with environmental laws and regulations. Regulated Asbestos Containing Materials (RACM) must be removed prior to construction and disposed at an approved landfill. Non-friable ACM debris can be disposed as inert construction debris with approval of the North Dakota Department of Health. Asbestos-cement products (such as transite) are commonly used for duct insulation, pipes, and siding. Being a Category II non-friable ACM, asbestos-cement products need to be removed prior to construction if they have a high probability of becoming crumbled, pulverized, or reduced to powder during removal activities. Many removal activities will subject such Category II non-friable ACM to the regulation because of the use of heavy equipment. Whether asbestos-cement products are subject to the asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) should be determined by the owner or operator on a case-by-case basis based on the removal techniques to be used. In general, if contractors carefully remove asbestos-cement materials using tools that do not cause significant damage, the materials are not considered RACM and can be disposed with other construction debris. However, if removal is accomplished through the use of heavy equipment, cutting or drilling tools, asbestos-cement products will be crumbled, pulverized or reduced to powder, and are subject to the provisions of the asbestos NESHAP. It is anticipated that approximately 50 feet will be removed from the Pump Building 801 going east and approximately 827 feet will be removed from the east side of 25th Street to the east towards the lagoon in a manner that will require disposal as RACM. Significantly damaged asbestos-cement products will be handled as RACM; if mixed and disposed with other demolition debris, it is in direct violation of the waste-disposal provisions of the asbestos NESHAP.

Appropriate efforts to reduce, reuse and/or recycle waste materials are encouraged by the State of North Dakota. All solid waste materials would be managed and transported in accordance with the state's solid and hazardous waste rules. Provided BMPs are followed, significant impacts to hazardous materials and waste management, solid waste management, Installation Restoration Program (IRP) sites, asbestos-containing material abatement and lead-based paint abatement are not expected.

Water Resources – The project includes open excavation of the site at a distance approximately 40 ft from the center of the road. Excavation will include use of heavy equipment such as bulldozers trenching 10 ft wide and 12 ft deep. The wetland being affected by proposed replacement of the sanitary sewer is identified as follows. To the southwest of lagoon primary cell one is a 3.4 acre wetland area #LS-04. Very close to wetland site #LS-04, the existing transite pipe will be abandoned in place, and two new parallel lines of PVC pipe shall be installed by trenching 10 ft wide and 12 ft deep. Prior to construction, the contractor will stake the existing wetlands. Stakes are to remain in place until construction is complete. The 3.4 acre wetland shall be flagged around the perimeter to notify construction personnel not to enter the site so as to avoid wetland impacts; however the US Corps of Engineers has estimated that 0.05 acre will be impacted. The construction site has potential for heavy equipment and excavation efforts to affect wetlands by unintentional discharge. Silt fencing in this area shall be installed around the construction zone to prevent discharge to the 3.4 acre wetland and to the adjacent drainage ditch leading to east of the lagoons.

Along the south edge of the lagoon primary cell one is a 0.07 acre roadside wetland ditch #LS-05. Excavation for aging pipe removal and replacement will take place directly in #LS-05 and will directly impact this roadside wetland. The work includes removal and replacement of existing sanitary sewer force main transite pipe with PVC pipe. Excavation affecting this small ditch-wetland shall be addressed by bringing the original ditch elevation back to grade so that no permanent fill of the ditch shall remain. Removed vegetation shall be reseeded with wet meadow forbes and grass seed at the project's end. Application for a Section 404 permit was made to the United States Corps of Engineers (USACE) and they instructed the Base to utilize and adhere to a nationwide permit #12. Drainage will convey surface water runoff. With the ditch wetland restored to original elevation and vegetation, it is anticipated there will be no other mitigation required.

Along the west edge of the lagoon primary cell one is a 47 acre large palustrine/lacustrine wetland system #LS-02 with open water on the north end. No activities in the wetland #LS-02 are permitted during construction. This wetland is farther from the work site (greater than 40 ft from the center of the road) and should not be impacted, unless there was an unintentional discharge from heavy equipment.

Short-term impacts to water resources would be avoided or minimized through implementation of BMPs, such as silt fences and traps, detention basins, buffer strips or other features used in various combinations, (i.e., erosion control measures), as part of the Proposed Action. If an excavated area fills with groundwater, water would need to be pumped from the excavation, filtered and discharged as surface water. Proper stabilization and seeding the site immediately upon completion of the construction would provide beneficial vegetation, controlling erosion. Provided BMPs are followed, there would be insignificant impacts on stormwater, surface water, wastewater, water quality and floodplains. Because of the extent of the wetland within the ditch and the proximity to storm sewer pipe, the project cannot avoid directly impacting wetlands. The area leading to the lagoon is relatively surrounded by wetlands on one side and a road on the other and there is no practicable alternative to siting the replacement pipe within this small roadside wetland. The area surrounding the new sanitary sewer site would be restored with drainage to convey surface water runoff. Because this wetland would be impacted, a FONPA must be prepared and submitted for review and approval by the Headquarters, Air Mobility Command (HQ AMC) Director, Installations and Mission Support prior to implementing the impacting activity.

The section 404 permit was returned from the USACE regarding the sanitary sewer force main project as shown in Appendix D, with instructions to utilize and adhere to a nationwide permit (NWP). The Corps made a preliminary determination that the project affected wetlands are jurisdictional: 0.07 acre in #LS-05 and 0.05 acre in #LS-04. Per discussion between Patsy Crooke of the USACE and Kristen Rundquist of the Base, as shown in enclosed email in Appendix D, each wetland affected is considered a project, and because the affected acreage of each wetland is less than 1/10th of an acre, the Base does not have to mitigate under Nationwide Permit #12. Any jurisdictional wetland over 1/10th requires mitigation. The Base also is not required to submit a preconstruction notification either, as it does not qualify under any of the listed criteria shown on page 2 of the NWP #12 factsheet in Appendix D. The nationwide permit has several BMPs the Base is required to follow, and these are listed in the permit.

Base engineers must ensure that the eventual contractor follows the BMPs in the permit. When the project is complete, the Base is required to sign the Nationwide Permit, detail what was done to follow the BMPs in the permit, and return the permit within 30 days of project completion. If the Base should deviate from the project, additional authorization is required. At project's completion, the Base engineers will describe all the activities completed in the return package to the Corps.

Biological Resources –BMPs and control measures, including silt fences, storm drain covers, covering of stockpiles and keeping construction equipment in construction areas, would be implemented to ensure that impacts to biological resources be kept to a minimum. Disturbed areas should be re-established as soon as possible. BMPs would be required to prevent the spread of noxious weeds, minimize soil erosion and promote the establishment of native plant species. BMPs to limit possible weed seed transport from infested areas to non-infested sites, avoiding activities in or adjacent to heavily infested areas, removing seed sources and propagules from site prior to conducting activities, limiting operations to non-seed producing seasons, washing or otherwise removing all vegetation and soil from equipment before transporting to a new site will help control noxious weeds on federal properties IAW Public law 93-629, the federal noxious weed act (7 USC 2801 et seq.) and executive order 13112. Construction with pipe replacement would have insignificant impacts to vegetation, wildlife and state-threatened and endangered species. There is no impacts anticipated to federal threatened and endangered species. The proposed construction area is an unimproved area where road side grass is maintained by the grounds maintenance contractor. Due to the mobility of wildlife species present at this location and the profusion of similar landscaped areas in the general vicinity, any wildlife disturbed would be able to find similar habitat in the local areas.

Socioeconomic Resources - The Proposed Action would not involve relocation of personnel to the region of influence (ROI); therefore, no change to the population would be expected. The economic benefits would be local and short-term with no permanent employment positions created; therefore, there would be no long-term or significant changes to employment and income potential in the ROI. Secondary retail purchases would make an additional contribution to the local communities. The implementation of the Proposed Action, therefore, would provide a short-term, beneficial impact to the local economy during the construction phase of the project.

Cultural Resources - There are no eligible or potentially eligible National Register of Historic Places (NRHP) archeological sites on Grand Forks AFB, but there are potentially eligible NRHP Cold-War buildings on the base proper. The site of the sanitary sewer project is over two miles from these buildings. Coordination with the State Historical Society of North Dakota for a “No Historic Properties Affected” determination was accomplished.

In the unlikely event any archaeological artifacts are discovered during the replacement of the sanitary sewer pipe, the operator or contractor would be instructed to halt operations and immediately notify the Grand Forks AFB Cultural Resource Manager who would notify the State Historic Preservation Officer.

Borrow material is to be derived from an archeological-approved source of the State Historical Society of North Dakota.

Land Use – The Proposed Action includes the purchase of an additional 7 feet of permanent easement at a length of 1780 feet of adjacent farmland. This amounts to 0.29 acre of additional easement. The landowner would still be able to farm the land, with the understanding that the Base would have access to it should maintenance work need to be done on the force mains in the future. The need of an additional easement is being coordinated with Grand Forks AFB Civil Engineering and HQ AMC. The proposed construction would not change the USAF land use, since the new sanitary sewer is in the area designated for Industrial operations. The USAF land use planning process is designed to ensure efficient use of available resources and that the functional relationships of land use arrangements meet the goals and objectives of the base. A significant mission change from KC-135 refueling tankers to the Remotely Piloted Aircraft (RPA) with military population decline is anticipated in the foreseeable future of Grand Forks AFB and is currently being assessed with an EIS. However, other associations with RPA mission organizations may prove to be healthy growth in the long-term future. No population growth fluctuations are anticipated in the foreseeable future of this construction project. The Proposed Action has no adverse impact to land use, but does have positive impact to overall land use with a more efficient sanitary sewer.

Transportation Systems – The Proposed Action would have insignificant adverse impact to the township road adjacent to the site due to vehicles traveling to and from the new sanitary sewer construction site.

Airspace/Airfield Operations - The Proposed Action would have no impact to aircraft safety and airspace compatibility with the new sanitary sewer.

Safety and Occupational Health – The removal of ACM pipe would resolve potential health issues related to biological sanitary sewage leakage. Participants in the construction are required to wear appropriate personnel protective equipment (PPE) for protection from exposure to bacteria, parasites and ACM. Any excavation in this area needs to be reviewed by the Base Bioenvironmental Engineer for worker protection. Implementation of the Proposed Action would result in long-term benefits to personnel health and safety by improving the working conditions in the new sanitary sewer. Provided best management practices are used, the Proposed Action would have positive long-term impact on safety and occupational health.

Environmental Management – Provided BMPs are followed, the Proposed Action would not impact IRP sites, geology or soils. BMPs would be implemented to prevent increased runoff, erosion and sedimentation from soils exposed during construction activities. The soils in the project areas have been previously disturbed by development for sanitary sewer pipes. Approximately 1.7 acres would be disturbed, following an approved erosion and sediment control plan, in completing the construction activities. No long-term impacts would be expected following grading and revegetation in the project areas.

Environmental Justice - EO 12898 requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies and activities on minority and low-income populations. There are no minority or low-income populations within or immediately adjacent to the area of the Proposed Action or Alternatives and, thus, there would be no disproportionately high or adverse impact on such populations.

Cumulative Impacts. The potential environmental impacts resulting from the incremental impacts of the Proposed Action when added to other past, present and reasonably foreseeable future actions were considered for the cumulative impacts analysis. The Master Space Plan described in the General Plan for

Grand Forks AFB was developed to guide development for the next 15 to 20 years. Under the plan, substandard facilities and utilities would be demolished and replaced with new construction that meets AMC standards. The Proposed Action would be implemented concurrent with capital improvement projects specified in the General Plan that are assessed in separate NEPA documents as necessary. Potential impacts to resources would be similar to the Proposed Action in this EA and would revert to baseline conditions after completion of the project. The USAF land use planning process is designed to ensure efficient use of available resources and that the functional relationships of land use arrangements meet the goals and objectives of the base. A major mission change from KC135 refueling tankers to the Remotely Piloted Aircraft (RPA) with military population decline is anticipated in the foreseeable future of Grand Forks AFB. However, other associations with Air National Guard, Department of Homeland Security and other organizations involved in the RPA mission may prove to be healthy growth in the long-term future of Grand Forks AFB. The potential cumulative adverse impacts to resources of interest in this EA are short-term (an estimated 100 days) and insignificant. The Proposed Action would be limited to the existing footprint, plus a new 7 foot easement, and would not have long-term adverse impacts to resources on Grand Forks AFB, Grand Forks County, or the State of North Dakota.

1.0 PURPOSE OF AND NEED FOR PROPOSED ACTION

The 319th Air Refueling Wing (319 ARW) proposes to replace the sanitary sewer force main lines from the main gate lift station (Building 801) to the lagoons at Grand Forks Air Force Base, North Dakota. The 319th proposes to add seven feet to the permanent easement with the existing landowner.

This Environmental Assessment (EA) examines the potential for impacts to the environment resulting from replacement of the sanitary sewer on Grand Forks Air Force Base (AFB), as well as removal of portions of the existing sanitary sewer pipe. As required by the National Environmental Policy Act (NEPA) of 1969, federal agencies must consider environmental consequences in their decision-making process. The Air Force complies with NEPA through adherence to 40 Code of Federal Regulations (CFR) 1500-1508, Council on Environmental Quality's (CEQ's) Regulations for Implementing the Procedural Provisions of NEPA, and 32 CFR 989, Air Force Environmental Impact Analysis Process. The EA provides analysis of the potential environmental impacts from both the Proposed Action and the Alternatives to determine whether the Proposed Action would have a significant adverse effect on the quality of the environment. This environmental assessment is assigned RCS number 2010-036. The Automated Civil Engineering System-Project Management (ACES-PM) project number assigned is JFSD200803. A copy of the AF Form 813 describing the Proposed Action is found in Appendix A.

1.1 INTRODUCTION

Located in northeastern North Dakota (ND), Grand Forks AFB is an air refueling wing in Air Mobility Command (AMC) and home to 12 KC-135R Stratotanker aircraft. The host organization at Grand Forks AFB is the 319th Air Refueling Wing (ARW). Its mission is to guarantee global reach, by extending range in the air, supplying people and cargo where and when they are needed and provides air refueling and airlift capability support to United States Air Force (USAF) operations anywhere in the world, at any time. Organizational structure of the 319th ARW consists primarily of an operations group, maintenance group, mission support group and medical group.

The location of the Proposed Action and the Alternative action would be at Grand Forks AFB, ND. Grand Forks AFB covers approximately 5,337 acres of government-owned land and is located in northeastern ND, about 14 miles west of Grand Forks, along United States (US) Highway 2. See Figure 1.1 for a location map. Grand Forks (population 49,321) is the third largest city in ND. The city and surrounding area, is a regional center for agriculture, education and government. It is located approximately 160 miles south of Winnipeg, Manitoba and 315 miles northwest of Minneapolis, Minnesota. The total base population, as of Sept 2009, is approximately 5,084. Of that, 1,784 are military, 2,254 are military dependents, 376 are appropriated fund (APF) civilians, 31 are Department of Homeland Security and 639 are other civilians working on base (Grand Forks AFB, 2009).

The Base Realignment and Closure (BRAC) 2005 Report submitted by the President to Congress became final on November 8, 2005. This was a milestone in the restructuring of DOD's domestic base structure within the process established by Congress. The Department began this implementation process within two years from the date the President submitted to the Congress (September 15, 2005) and must complete it within six years. The BRAC Commission's final recommendation included realignment of the 319th Air Refueling Wing's KC-135-R/T aircraft to Scott AFB, Seymour-Johnson AFB, MacDill AFB, Hickam AFB and McConnell AFB. It recommended modification of infrastructure at Grand Forks AFB to accommodate the emerging Unmanned Aircraft System (UAS) mission, now renamed Remotely Piloted Aircraft (RPA). Twelve KC-135 aircraft now remain at Grand Forks AFB to facilitate an efficient and cost effective bed down of the RPA. The tankers remain in place until the RPA is operational at GFAFB, but not later than December 2010, unless otherwise required for national emergencies. A loss of 1,406 personnel is anticipated. Grand Forks remains an active Air Force installation with a new active duty/Air

National Guard association unit created in anticipation of emerging missions at Grand Forks. The 119th Fighter Wing at Hector International Airport Air National Guard Station at Fargo ND is to be redesignated as a RPA wing and the facility in Fargo would be expanded to accommodate the RPA ground control and intelligence analysis functions and expeditionary combat support elements. The Air Force would construct appropriate facilities on GFAFB to launch, recover, maintain and support the RPA assigned to the 119th FW. The RPA beddown is being evaluated by an Environmental Impact Statement currently in progress.

1.2 NEED FOR THE ACTION

The sanitary sewer force main from the main gate lift station (Building 801) to the lagoons consists of one 10 inch pipe and one 8 inch pipe. See Figure 1.2. Grand Forks AFB proposes to replace the two lines of 100 weight transite pipe (7,500 LF) with two 10 inch C-900 PVC pipe from Building 801 to the lagoons directly east of the main gate. Emergency repairs were performed three times in 2009 alone. The existing 53 year old transite pipe force main suffers from durability cracking and is beginning to develop leaks. Transite is a concrete pipe containing asbestos. If no action is taken, the transite piping may ultimately fail and emergency repairs may be needed to minimize the potential for releases of raw sewage to the environment.

1.3 OBJECTIVES FOR THE ACTION

This action is proposed to simplify maintenance requirements and reduce infrastructure repair costs of the sewer main. The Proposed Action is needed for replacing the pipe with a more durable and cost effective material. Removal of the aging pipe would allow funds now expended on maintenance and repairs to be used more efficiently on functioning utilities and infrastructure.

Replacement of the sanitary sewer force main pipe would remove outdated infrastructure that represents sources of potential biological contamination, such as sanitary sewage containing bacteria and parasites. Removal of the aging pipe would eliminate future environmental hazards.

1.4 SCOPE OF EA

This EA identifies, describes and evaluates the potential environmental impacts associated with the Proposed Action to replace the sanitary sewer force main at the adjacent sanitary sewer site, landfill 877 LF of transite pipe, purchase an additional 7'x 1780' easement (0.29 acre), and regrade and reseed the area to reestablish the wetland vegetation with wet meadow forbes and grass seed. Except for possible cumulative impacts, it does not analyze unrelated construction and construction activities.

The following resources must be considered under the NEPA, Section 102(E).

- Air Quality
- Noise
- Wastes, Hazardous Materials and Stored Fuels
- Water Resources
- Biological Resources
- Socioeconomic Resources
- Cultural Resources
- Land Use
- Transportation Systems
- Airspace/Airfield Operations

- Safety and Occupation Health
- Environmental Management
- Environmental Justice

1.5 DECISION(S) THAT MUST BE MADE

This EA evaluates the environmental consequences from the to replace the sanitary sewer force main at the adjacent sanitary sewer site, landfill 877 LF of transite pipe, purchase an additional 7’x 1780’ easement (0.29 acre), and regrade and reseed the area to reestablish the wetland vegetation.

These actions are proposed to replace aging sanitary sewer force main pipe in accordance with the Grand Forks AFB master plan, as well as provide a functional sanitary sewer. NEPA requires that environmental impacts be considered prior to final decision on a proposed project. The Asset Management Flight Chief would determine if a Finding of No Significant Impact can be signed or if an Environmental Impact Statement (EIS) must be prepared. Preparation of an environmental analysis must be accomplished prior to a final decision regarding the proposed project and must be available to inform decision makers of potential environmental impacts of selecting the Proposed Action or any of the Alternatives.

1.6 APPLICABLE REGULATORY REQUIREMENTS AND REQUIRED COORDINATION

These regulations require federal agencies to analyze potential environmental impacts of the proposed action and alternatives and to use these analyses in making decisions on a proposed action. All cumulative effects and irretreivable commitment of resources must also be assessed during this process. The Council on Environmental Quality (CEQ) regulations declares that an EA is required to accomplish the following objectives:

- Briefly provide sufficient evidence and analysis for determining whether to prepare an EIS or a Finding of No Significant Impact (FONSI).
- Aid in an agency’s compliance with NEPA when an EIS is not necessary and facilitate preparation of an EIS when necessary.

Air Force Instruction (AFI) 32-7061 as promulgated in 32 Code of Federal Regulations (CFR) 989, specifies the procedural requirements for the implementation of NEPA and the preparation of an EA. Other environmental regulatory requirements relevant to the proposed action and alternatives are also in this EA. Regulatory requirements including, but not restricted to the following programs would be assessed:

- AF Environmental Impact Analysis Process (EIAP) (32 CFR 989)
- AFI 32-7020, Environmental Restoration Program
- AFI 32-7040, Air Quality Compliance
- AFI 32-7041, Water Quality Compliance
- AFI 32-7042, Solid and Hazardous Waste Compliance
- AFI 32-7063, Air Installation Compatible Use Zone (AICUZ) Program
- AFI 32-7064, Integrated Natural Resource Management
- AFI 32-7065, Cultural Resources Management Program
- Archaeological Resources Protection Act (ARPA) [16 U.S.C. Sec 470a-11, et seq., as amended]
- Clean Air Act (CAA) [42 U.S.C. Sec 7401, et seq., as amended]
- Clean Water Act (CWA) [33 U.S.C. Sec 400, et seq.]

- CWA [33 U.S.C. Sec 1251, et seq., as amended]
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) [42 U.S.C. Sec. 9601, et seq.]
- Defense Environmental Restoration Program [10 U.S.C. Sec. 2701, et seq.]
- Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 [42 U.S.C. Sec. 11001, et seq.]
- Endangered Species Act (ESA) [16 U.S.C. Sec 1531-1543, et seq.]
- Executive Order (EO) 11514, Protection and Enhancement of Environmental Quality as Amended by EO 11991
- EO 11988, Floodplain Management
- EO 11990, Protection of Wetlands
- EO 12372, Intergovernmental Review of Federal Programs
- EO 12898, Environmental Justice
- EO 12989 Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations
- EO 13045, Protection of Children from Environmental Health Risks and Safety Risks
- EO 13112, Invasive Species
- Hazardous Materials Transportation Act of 1975 [49 U.S.C. Sec 1761, et seq.]
- NEPA of 1969 [42 U.S.C. Sec 4321, et seq.]
- National Historic Preservation Act (NHPA) of 1966 [16 U.S.C. Sec 470, et seq., as amended]
- The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 [Public Law 101-601, 25 U.S.C. Sec. 3001-3013, et seq.]
- Noise Control Act of 1972 [42 U.S.C. Sec. 4901, et seq., Public Law 92-574]
- ND Air Pollution Control Act (Title 23) and Regulations
- ND Air Quality Standards (Title 33)
- ND Hazardous Air Pollutants Emission Standards (Title 33)
- Occupational Safety and Health Act (OSHA) of 1970 [29 U.S.C. Sec. 651, et seq.]
- Resource Conservation and Recovery Act (RCRA) of 1976 [42 U.S.C. Sec. 6901, et seq.]
- Toxic Substances Control Act (TSCA) of 1976 [15 U.S.C. Sec. 2601, et seq.]

Grand Forks AFB has a National Pollutant Discharge Elimination System (NPDES) permit for both waste water and storm water to cover base-wide industrial activities. Implementation of the Proposed Action for construction of a new sanitary sewer and removal of pipe would disturb approximately 1.7 acre and thus would require the need for Grand Forks AFB or the construction contractor to obtain a separate NPDES construction permit from the North Dakota Department of Health (NDDH). The Base general small site permit would not cover this activity to replace the sanitary sewer and demolish portions of the existing sanitary sewer and would need to be tracked by the construction agent IAW the appropriate rules. The permit would regulate discharge of storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover.

Scoping for this EA included discussion of relevant issues with members of the environmental management and bioenvironmental flights. Scoping letters requesting comments on possible issues of concern are sent to agencies with pertinent resource responsibilities. Interagency correspondence is found in Appendix C. In accordance with 32 CFR 989, a copy of the final EA is submitted to the ND Division of Community Services.

Applicable regulatory requirements, environmental controls and required coordination before and during construction include Preconstruction Survey Report, Health and Safety Plan, a Work Clearance Request,

Stormwater Protection Plan, Dust Control Plan, Spill Control Plan and Erosion and Sediment Control Plan to the CEV Water Program Manager; a Pollution Prevention Plan, Asbestos Removal and Disposal Plan, Spill Control Plan and Waste Disposal Plan to the CEV Pollution Prevention Manager; and copies of all plans to the Contracting Officer. The contractor performing the action would be required to submit these plans and specification to the 319 CES for approval prior to initiating work. The Proposed Action includes the removal and disposal of portions of the transite pipe. Consultation with SHPO was accomplished in coordination with this EA and their correspondence is found in Appendix C. A request to the ND State Department of Health for the abandonment in place of the pipe must be approved prior to initiation of the contract. A Notification of Demolition and Renovation must be provided to the ND State Department of Health ten days prior to initiation of removal.

The Intergovernmental Coordination Act and EO 12372, Intergovernmental Review of Federal Programs, require federal agencies to cooperate with state and local agencies and to consider their views on implementing a federal proposal. Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) is required under AFI 32-7060 for the purpose of agency coordination. The Description of Proposed Action and Alternatives (DOPAA) was provided to relevant federal, state, and local agencies for their input during the scoping process. Section 6.0 lists the agencies provided with a copy of the draft DOPAA and EA. USAF considered their input in the planning process; comment letters received are included in Appendix C. Initially, a Categorical Exclusion FONPA for the Proposed Action without a seven foot permanent easement was made available for a 30-day public Comment period, May 1 to June 1, 2010, to solicit the input of these and other agencies as well as other interested parties. A public notice was published in the Grand Forks Herald on May 1 and 4, 2010, and available on the GFAFB public website from May 1 to June 1. There were no comments. An EA with FONSI/FONPA to include the seven foot easement was made available for a 30-day public comment period starting August 10, 2010. A copy of the public notice is found in Appendix B. A Public Notice of Availability for the EA and Draft FONSI/FONPA was published in the Grand Forks Herald on August 10 and 12, 2010. The EA and Draft FONSI/FONPA were available on the Grand Forks AFB public web site, <http://www.grandforks.af.mil/library/index.asp>, for the same time period. (No public comments were received.) The IICEP and public comment effort was performed to solicit agency and public input in the decision-making process.

The following pages include:

- Figure 1.1, the location map for Grand Forks AFB ND
- Figure 1.2, the map of Grand Forks AFB with the project location
- Figure 1.3, the wetlands map for Grand Forks AFB
- Figure 1.4, the utilities map with waste water lines
- Figure 1.5, the wetland delineation locations
- Figure 1.6, the wetland delineation location data points
- Figure 1.7, the drawing of the positions of the existing vs proposed force main

Grand Forks AFB, ND

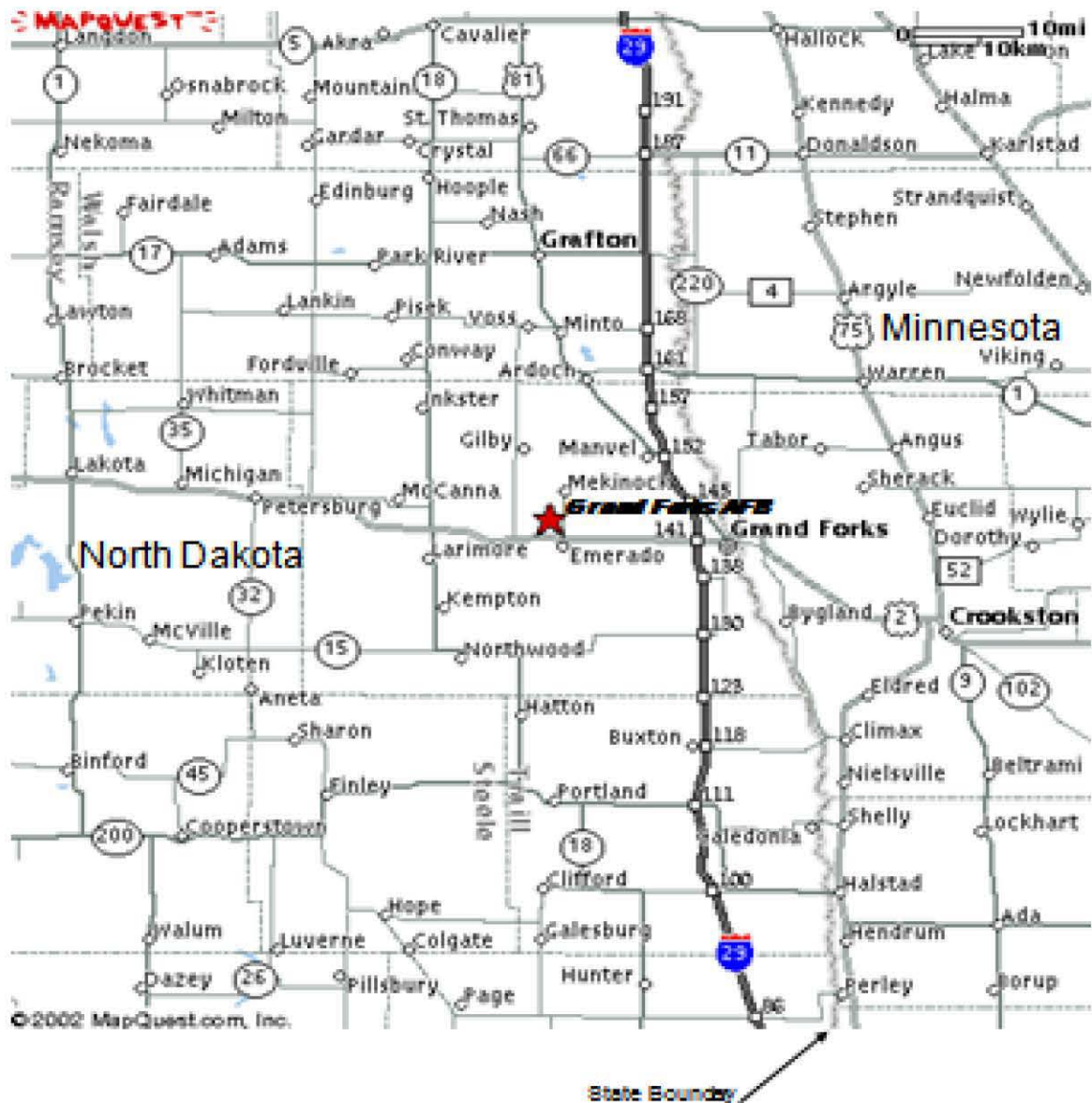


Figure 1.1 Location of Grand Forks Air Force Base in eastern North Dakota

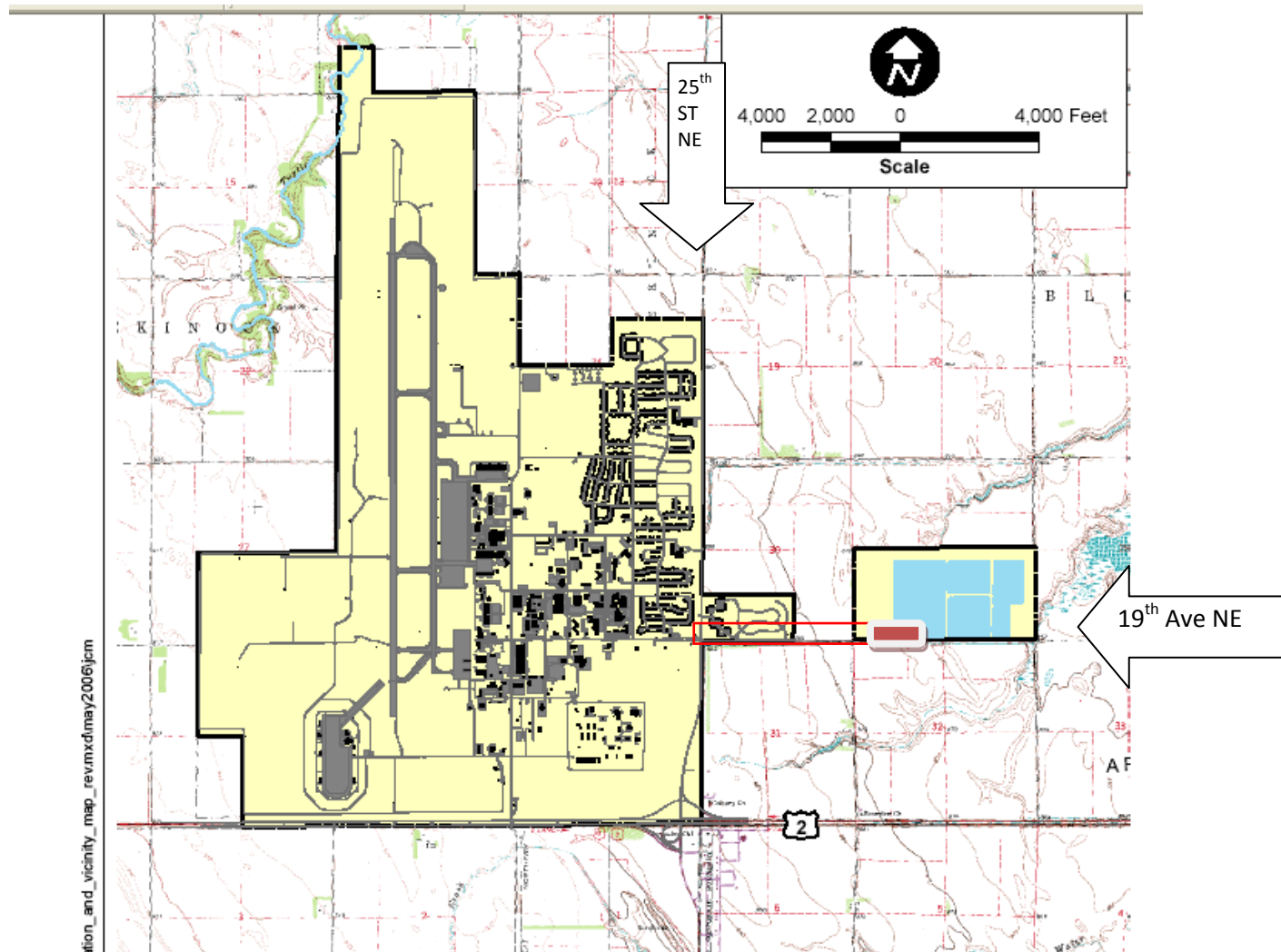


Figure 1.2 Map of Grand Forks AFB. Sanitary sewer project takes place within red line, along north side of 19th Ave NE. Wetland portion encircled by red fill white outline. Kellys Slough National Wildlife Refuge is located to the east of the lagoons, as noted in blue, north of 19th Ave NE.

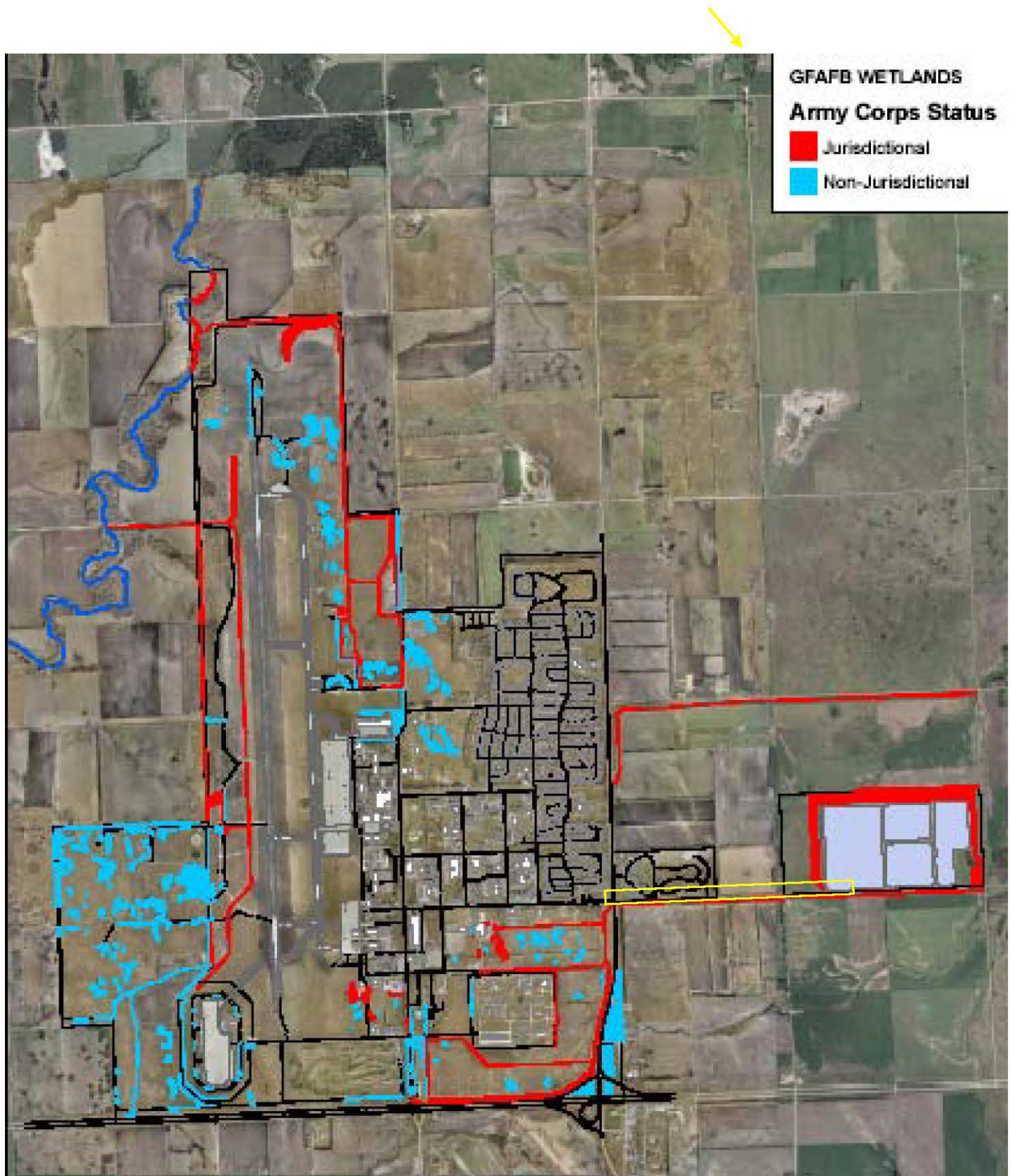


Figure 1.3 Wetland Locations on GFAFB. Proposed construction in yellow along north side of road. Jurisdictional wetland along south side of road.

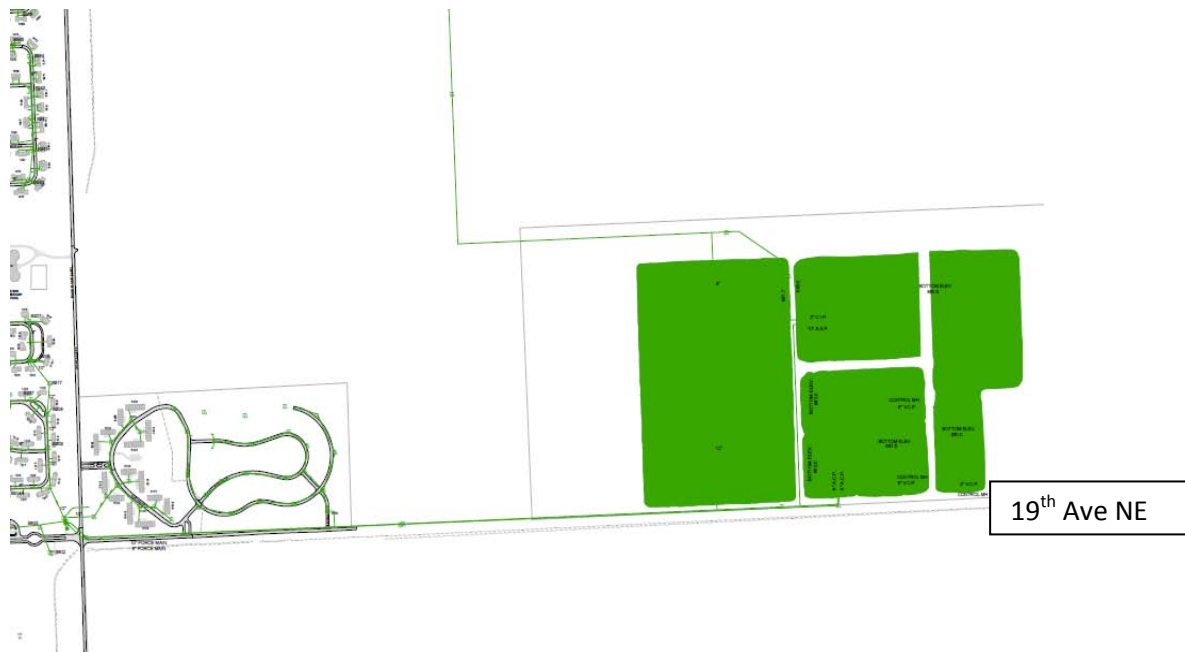


Figure 1.4 Waste water lines in green

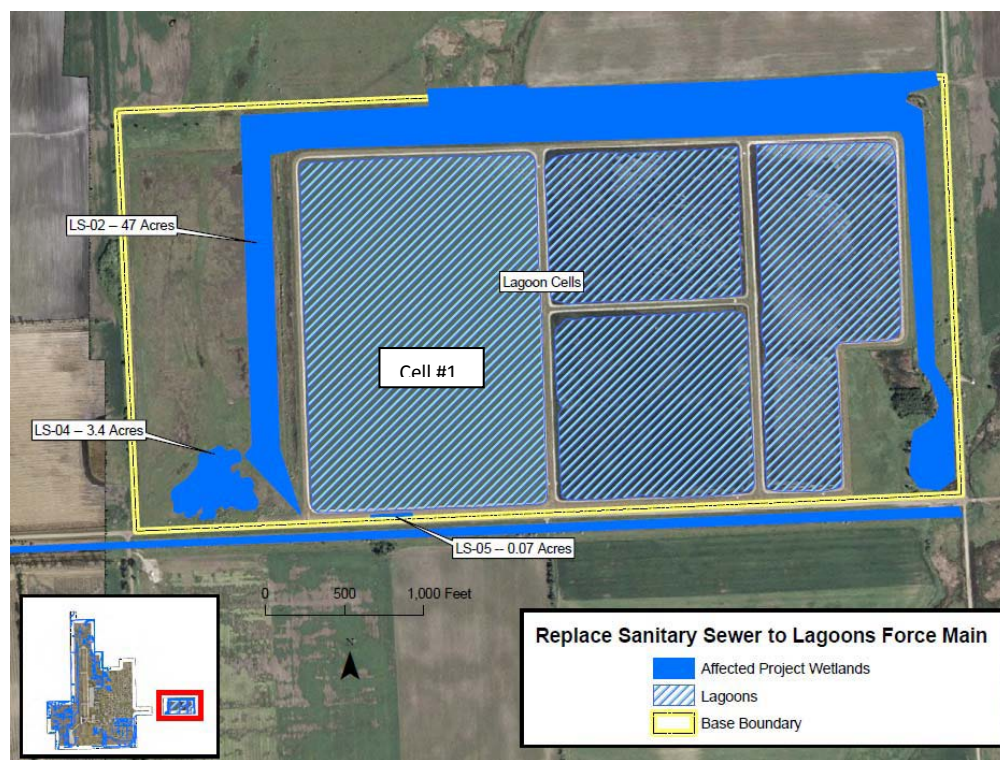
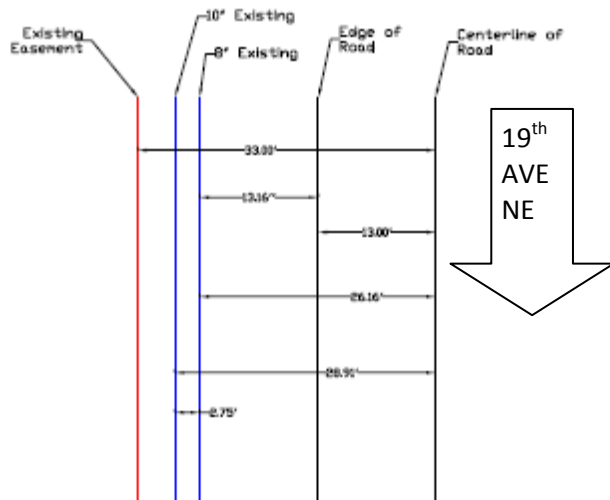


Figure 1.5 Wetland Delineation Locations in area of sanitary sewer replacement



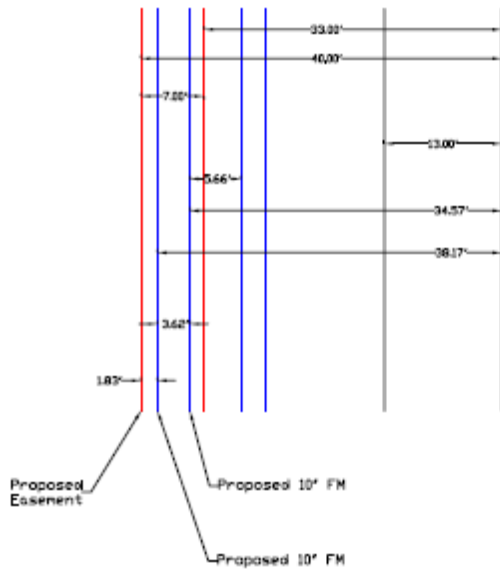
Figure 1.6 Wetland Delineation Locations in relation to new sanitary sewer data points



19th
AVE
NE

North

South



West

Figure 1.7 Drawing to reflect the proposed positions of the new force main in relation to the existing force main, and the requirement for an additional 7 ft of easement

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

Based on the descriptions of the relevant environmental resources presented in Section 3 and the predictions and analyses presented in Section 4, this section presents a comparative summary matrix of the alternatives (the heart of the analysis), providing the decision maker and the public with a clear basis for choice among the alternatives.

This section has five parts:

- Selection Criteria for Alternatives
- Alternatives Considered but Eliminated from Detailed Study
- Detailed Descriptions of the Three Alternatives Considered
- Comparison of Environmental Effects of the Proposed Action and Alternatives
- Identification of the Preferred Alternative

2.2 SELECTION CRITERIA FOR ALTERNATIVES

Selection criteria used to evaluate the Proposed and Alternative Actions to Replace the Sanitary sewer force main from Building 801 to the Lagoons include the following:

- Provide sanitary sewer system service effectively to all areas of the Base
- Consistent with the purpose and need of the Proposed Action
- Support a modern sanitary sewer force main line and allow for future maintenance
- Provide infrastructure in compliance with DoD and USAF planning and design manuals
- Provide utilities without adverse impacts to operation or future land use in this area in accordance with Base General Plan
- Meet functional requirements and safety of wastewater personnel to support the base mission
- Avoid or minimize impacts to the natural and man-made environment
- Comply with local, state and federally mandated requirements and protocols
- Meet the current mission requirements of the installation
- Improve the versatility of the base for accepting new missions
- Eliminate or minimize potential hazards to safety and biohazards that could occur in area
- Replace the aging sanitary sewer force main in the most cost effective means

2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

An alternative considered was to install the new main force main to the south of the existing 8 inch force main within the existing easement. This would place the new main right on the edge of the roadway, 19th Avenue NE, if not into the roadway at times. There is 13.16 feet from the edge of the roadway to the centerline of the existing 8 inch force main. See Figure 1.7. The base cannot excavate within 5 feet of the existing force mains as the pipe is fragile and it takes the chance of the lines breaking or moving during the proposed placement. If the base takes that dimension out of the 13.16' minus 6' (centerline to centerline), it leaves 7.16' minus the 6.16' wide trench as shown in the plan. There would be 1' from the edge of the roadway. This would cause the ground to become unstable causing portions of the road to cave into the trench during construction. The roadway would need to be closed during construction to allow work activities to take place. A trench 10' deep paralleling the edge of the roadway would be

unsafe to have traffic using the road. Future problems with sink holes and settling of the roadway will cause repetitive maintenance and repair problems for both the local township boards and the Base.

2.4 DESCRIPTION OF ALTERNATIVES

This section describes the activities that would occur under three alternatives: the No Action Alternative, the Proposed Action and Action Alternative. The three alternatives provide the decision maker with a reasonable range of alternatives from which to choose. A copy of Air Force Form 813, Request for Environmental Impact Analysis, is included in Appendix A.

2.4.1 Alternative 1 (No Action Alternative): Status Quo

The No Action Alternative would be to not replace the sanitary sewer and would leave the existing sanitary sewer in place. If no action is taken, the transite piping may ultimately fail and emergency repairs may be needed to minimize the potential for releases of raw sewage to the environment. Inadequate sewage disposal protection per Environmental Protection Agency and State of North Dakota standards would occur with the existing sanitary sewer. Infrastructure improvements to improve the effectiveness of the Base's mission to enhance quality of life, replace inefficient and inadequate utilities, and correct current deficiencies would not be initiated. The utility would continue to require increased funding to maintain and operate, while continuing to age and increase biological risk during sewage leaks.

2.4.2 Alternative 2 (Proposed Action)

Grand Forks AFB proposes to replace the sanitary sewer force main from the main gate lift station (Building #801) to the lagoons. See Figure 2.5. The base proposes to replace two existing 8" and 10" transite force main lines of 100 weight transite pipe (7,500 LF) with new dual 10" C-900 PVC pipe from Building 801 to the lagoons directly east of the main gate. See Figure 1.4. This route will follow the existing force main, with the new pipe being placed just north of the old in a single trench. See Figure 1.2. The project will provide air relief valves where required. The contractor will backfill and compact the area to provide site restoration, including minor fencing, landscaping, seeding and sodding. Approximately 877 LF of transite piping, near the exit and entrance sites, will be handled and disposed as ACM in accordance with State, Federal, and local regulations. The two pipes are buried adjacent to each other approximately 10 feet below ground level. The contractor will excavate and provide a trench box to allow removal of the asbestos pipe. The remaining estimated 6,623 LF will be abandoned in place in accordance with State, Federal, and local regulations. The alignment will include two directional borings that cross 25th Street NE, the main roadway at the entrance of the main gate. The design will require bypass pumping of the existing 8" line and existing 10" line during construction. Construction phasing can shorten the bypass pumping time, however it is the goal of this project to maintain service in two lines at all times. High voltage electrical relocation will need to be completed near the lift station. Grand Forks AFB has identified the straddle project as #JFSD200803.

Approximately 50 feet of pipe will be removed from the Pump Building (Building 801) going east and approximately 827 feet will be removed from the east side of 25th Street to the east towards the lagoons. The 8" and 10" sewer pipes are in 10 foot sections connected by a sliding coupling. These areas are at greater risk to become "friable" and release fibers into the air when new pipe and valves are installed and old pipe is cut for removal. The asbestos abatement contractor will excavate, enclose in two 6-mil polyethylene bags and provide a trench box for removal of the transite pipe. The waste shipment record will be provided to the Base before ACM is removed from site and within 35 days after receipt by the landfill. The contractor must develop and implement a written Asbestos Removal and Disposal Plan. Proof of disposal will be accomplished in accordance with 40 CFR 61 Subpart M, NDAC 33-15-13-

0215e, and the specifications of the contract. Exposed edges of asbestos pipe to remain will be encapsulated with a ¼ inch thick layer of nonasbestos insulating cement troweled to a smooth, hard finish. The existing transite, asbestos-cement, can remain in place as non-friable ACM. A request to the ND State Department of Health for the abandonment in place of the pipe must be approved prior to initiation of the contract. The existing sanitary sewer pipe is recorded in the Base GIS records and as-built drawings. As part of the planning for the project, the Base dug pot-holes to verify the locations of the existing pipe. The as-builts and GIS records will remain on file as long as the pipe remains in the ground. The new pipe will be wired with a continuous length of tracer wire for the full length of each run of nonmetallic pipe on the top of each pipe. The contractor shall use *survey grade* GPS to collect and provide data to be overlaid onto the installation's orthophotograph and Base map. GIS data will provide locations for future activities on both the old and new sewer pipe.

Along the southwest edge of lagoon primary cell one is a 3.4 acre wetland area #LS-04 (see Figure 1.3 and 2.1). Along the west edge of the lagoon primary cell one is a 47 acre large palustrine/lacustrine wetland system #LS-02 with open water on the north end (see Figure 1.6 and 2.3). Along the south edge of the lagoon primary cell one is a 0.07 acre roadside wetland ditch #LS-05 (see Figure 1.5 and 2.2). Prior to construction, the contractor will stake the existing wetlands. Stakes are to remain in place until construction is complete. No crossing into the wetland #LS-02 is permitted during construction; however it is anticipated that 0.05 acre will be affected in #LS-04. Excavation will take place directly in #LS-05 and will directly impact this 0.07 acre roadside wetland. Vegetation would be disturbed during pipe replacement, but long term impacts would be minimal as the area is reseeded with wet meadow forbes and grass seed and naturally reverts to wetland vegetation. Some recommended wetland species for Grand Forks AFB include Marsh Milkweed, Bottlebrush Sedge, Prairie Cordgrass, Woolly Sedge, Awl-Fruit Sedge, Baltic Rush, Wool-Grass, Soft-stem bulrush, Prairie Dogbane, Switch Grass, Virginia Wildrye, and Blue Joint Grass. Because the area leading to the lagoon is surrounded by wetlands on one side and the road on the other side, there is no practicable alternative to siting the replacement pipe within these two roadside wetlands.

The Proposed Action includes open excavation of the site at a distance approximately 40 ft from the center of the road. Excavation will include use of heavy equipment such as bulldozers trenching 10 ft wide and 12 ft deep. Near the lagoons by the small wetland #LS-05, the work includes removal and replacement of existing sanitary sewer force main transite pipe. The pipe replaced shall be made of PVC material. Near the 3.4 acre wetland site #LS-04, the existing transite pipe will be abandoned in place, and two new parallel lines of PVC pipe shall be installed. The 3.4 acre wetland shall be flagged around the perimeter to notify construction personnel not to enter the site so as to avoid wetland impacts; however it is anticipated that 0.05 acre will be impacted. The construction site has potential for heavy equipment and excavation efforts to affect wetlands by unintentional discharge. Silt fencing in this area shall be installed around the construction zone to prevent discharge to the 3.4 acre wetland and to the adjacent drainage ditch leading to east of the lagoons. The wetland #LS-05 that is adjacent to the lagoons requires complete excavation to replace the aging pipe. Excavation affecting this small ditch-wetland shall be addressed by bringing the original ditch elevation back to grade so that no permanent fill of the ditch shall remain. Removed vegetation shall be reseeded at the project's end. Application for a Section 404 permit was made to the USACE. The USACE instructed the Base to utilize and adhere to nationwide permit #12. With the ditch wetland restored to original elevation and vegetation, and each aquatic impact less than 1/10th of an acre, there will be no other mitigation required.

The Proposed Action includes the need for an additional 167 feet of temporary construction easement on the north side of the road, 19th Avenue Northeast, in addition to the existing 33 feet easement in place. This temporary construction easement is needed to allow room to store dirt, operate backfill and for other construction activities to take place. See Figure 1.7 and 2.4.

The Proposed Action includes the purchase of an additional 7 feet of permanent easement. This makes the easement 40 feet from the centerline of the roadway instead of the existing 33 feet easement in place. The length would be 1780 feet between stations 29+10 and 46+90 on the north side of the roadway, 19th Avenue Northeast. This length stretches from the government owned east edge of military family housing to the west edge of the lagoons. This amounts to 0.29 acre of additional easement. The landowner will be paid by the government for the permanent easement, as negotiated with the USACE. The landowner would still be able to farm the land, with the understanding that the base would have access to it should work need to be done on the force mains in the future.

2.4.3 Alternative 3

Alternative 3 is removing both the existing 8 inch and 10 inch force main pipes currently serving the sanitary sewer. To remove both lines from the end of the military housing area to the valves south of lagoon #1, which is approximately 3,645 feet, would cost an estimated \$300,000. Existing mains contain transite and are subject to strict environmental disposal rules. This alternative would add additional time and cost to the project. It would require a trained asbestos removal supervisor and worker on site at all times. It would increase the amount of asbestos containing transite by 80% to be disposed at an asbestos approved landfill. This alternative would allow the lines to be placed in the existing 33' easement. Existing mains must remain in service. Disturbing either one risks failure of the system.

Potential impacts to wetlands adjacent to the site would be minimized through use of erosion control best management practices. Typical erosion control measures such as silt fence and ditch checks would be used to prevent the release of construction site sediment to adjacent wetlands and drainage ditch.

The following photos show the proposed location of the new sanitary sewer project.



Figure 2.1 Photo of 3.4 acre wetland area #LS-04 along the SW edge of lagoon primary cell one. Proposed placement of pipe is 34.5' and 38.1' north (left, above) of centerline of road.



Figure 2.2 Photo of 0.07 acre roadside wetland ditch #LS-05 along the S edge of the lagoon cell #1



Figure 2.3 Photo of 47 acre palustrine/lacustrine wetland system # LS-02 looking north along the west edge of the lagoon primary cell one



Figure 2.4 Photo of the proposed location requiring additional easement. 19th Ave NE (gravel road) to the right. Farmer's field to the left.



Figure 2.5 Photo of Building 801, the lift station at the main gate of Grand Forks AFB

2.5 DESCRIPTION OF PAST, PRESENT and REASONABLY FORESEEABLE FUTURE ACTIONS RELEVANT TO CUMULATIVE IMPACTS

The purpose of the Proposed Action is to replace the aging 8" and 10" transite force main lines of 100 weight transite pipe (7,500 LF) with new dual 10" C-900 PVC pipe from the lift station at the main gate (Building 801) to the lagoons (cell #1) directly east of the main gate.

Impacts from the Proposed Action would be concurrent with other actions occurring at Grand Forks AFB. There are several other construction and construction projects occurring on Grand Forks AFB in the same time frame. An EIS for the beddown of the RPA mission is currently underway. These projects are addressed under separate NEPA documents, including the IDEA which includes projects from the five year master plan. There are no other future projects in the area of this sanitary sewer project.

2.6 SUMMARY COMPARISON OF THE EFFECTS OF ALL ALTERNATIVES

Potential impacts from implementing the No Action Alternative, the Proposed Action and Alternative are discussed in detail in Chapter 4. Table 4.14-1, Summary of Environmental Impacts, offers a summary of the environmental consequences. Short-term (ST) impacts are those that occur during the timeframe of the construction project (approximately 100 days) and long-term (LT) impacts occur subsequent to the completion of construction.

2.7 IDENTIFICATION OF PREFERRED ALTERNATIVE

This EA evaluates the Proposed Action to replace 7,500 LF of fifty three year old sanitary sewer force main pipe from the main gate to the lagoons.

This Proposed Action was selected as the Preferred Alternative after consideration of the potential impacts and the logistics of the project. The differences in impacts include the following:

- Proposed replacement of the sanitary sewer force main offers a site adjacent to the existing pipe. Approximately 877 LF of the transite piping, near the exit and entrance sites, will be handled and disposed as asbestos-containing material because valves cannot be abandoned in place, and associated exposed pipe must also be land filled as ACM. The base must purchase an additional 7'x1780' permanent easement.
- Alternative action will include significantly more costly disposal of 3,645 LF of transite pipe in an approved landfill. Removing all the transite pipe will add additional time for completion of the project, adding additional cost for labor and disposal. This alternative would allow the pipe to be placed in the existing 33' easement.
- Both the proposed and alternative actions to replace sanitary sewer pipe will impact a 0.07 acre jurisdictional roadside wetland ditch and a 0.05 acre portion of a nearby wetland. Both alternatives would bring the ditch back to grade and be reseeded with appropriate wet meadow forbes and grass seed to allow the vegetation to revert to a natural state at the completion of the project.
- Both the proposed and alternative actions replacement of the transite pipe will reduce maintenance and utility costs, and reduce biological risks from leakage of sanitary sewage.

The preferred alternative is the Proposed Action to replace the sanitary sewer force main at the new sanitary sewer site, landfill 877 LF of transite pipe, purchase an additional 7'x 1780' easement (0.29 acre), and regrade and reseed the area to reestablish the wetland vegetation.

3.0 AFFECTED ENVIRONMENT

3.1 INTRODUCTION

This section describes the operational concerns and the environmental resources relevant to the decision that must be made concerning the Proposed and Alternative Actions. Environmental concerns and issues relevant to the decision to be made and attributes of the potentially affected environment are studied in greater detail in this section. This descriptive section, combined with the definitions of the alternatives in Section 2 and their predicted effects in Section 4, establish the scientific baseline against which the decision-maker and the public can compare and evaluate the activities and effects of all the alternatives.

3.2 AIR QUALITY

Grand Forks AFB has a humid continental climate that is characterized by frequent and drastic weather changes. The summers are short and humid with frequent thunderstorms. Winters are long and severe with almost continuous snow cover. The spring and fall seasons are generally short transition periods. The average annual temperature is 40°Fahrenheit (F) and the monthly mean temperature varies from 6°F in January to 70°F in July. Mean annual precipitation is 19.5 inches. Rainfall is generally well distributed throughout the year, with summer being the wettest season and winter the driest. An average of 34 thunderstorm days per year is recorded, with some of these storms being severe and accompanied by hail and tornadoes. Mean annual snowfall recorded is 40 inches with the mean monthly snowfall ranging from 1.6 inches in October to 8.0 inches in March. Relative humidity averages 58 percent annually, with highest humidity being recorded in the early morning. The average humidity at dawn is 76 percent. Mean cloud cover is 48 percent in the summer and 56 percent in the winter (USAF, 2003).

Table 3.2-1: Climate Data for Grand Forks AFB, ND

Month	Mean Temperature (°F) Daily			Precipitation (Inches) Monthly		
	Maximum	Minimum	Monthly	Mean	Maximum	Minimum
January	15	-1	6	0.7	2.4	0.1
February	21	5	13	0.5	3.2	0.0
March	34	18	26	1.0	2.9	0.0
April	53	32	41	1.5	4.0	0.0
May	69	47	56	2.5	7.8	0.5
June	77	56	66	3.0	8.1	0.8
July	81	61	70	2.7	8.1	0.5
August	80	59	67	2.6	5.5	0.1
Sept	70	49	57	2.3	6.2	0.3
October	56	37	44	1.4	5.7	0.1
November	34	20	26	0.7	3.3	0.0
December	20	6	12	0.6	1.4	0.0

Source: AFCCC/DOO, October 1998

Wind speed averages 10 miles per hour (mph). A maximum wind speed of 74 mph has been recorded. Wind direction is generally from the northwest during the late fall, winter and spring and from the southeast during the summer.

Grand Forks County is included in the ND Air Quality Control Region. This region is in attainment status for all criteria pollutants. In 1997, the ND Department of Health (NDDH) conducted an Air Quality Monitoring Survey that indicated that the quality of ambient air in ND is generally good as it is

located in an attainment area (NDDH, 1998). Grand Forks AFB has an air permit T5-F78004 (permit to operate) issued by NDDH and a CAA Title V air emissions permit.

The United States Environmental Protection Agency (USEPA) established the National Ambient Air Quality Standards (NAAQS), which define the maximum allowable concentrations of pollutants that may be reached, but not exceeded within a given time period. The NAAQS regulates the following criteria pollutants: Ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb) and particulate matter. The ND Ambient Air Quality Standards (NDAAQS) were set by the State of ND. These standards are more stringent and emissions for operations in ND must comply with the Federal or State standard that is the most restrictive. There is also a standard for hydrogen sulfide (H₂S) in ND.

Prevention of significant deterioration (PSD) regulations establishes SO₂, particulate matter 10 microns in diameter (PM₁₀) and NO₂ that can be emitted above a premeasured amount in each of three class areas. Grand Forks AFB is located in a PSD Class II area where moderate, well-controlled industrial growth could be permitted. Class I areas are pristine areas and include national parks and wilderness areas. Significant increases in emissions from stationary sources (100 tons per year (tpy) of CO, 40 tpy of nitrogen oxides (NO_x), volatile organic compounds (VOCs), or sulfur oxides (SO_x), or 15 tpy of PM₁₀) and the addition of major sources requires compliance with PSD regulations. There is also a 25 ton/year level for total particulate.

Air pollutants include O₃, CO, NO₂, SO₂, Pb and particulate matter. Ground disturbing activities create PM₁₀ and particulate matter 2.5 microns in diameter (PM_{2.5}). Combustion creates CO, SO₂, PM₁₀ and PM_{2.5} particulate matter and the precursors (VOC and NO₂) to O₃. Only small amounts of Hazardous Air Pollutants (HAP) are generated from internal combustion processes or earth-moving activities. The Grand Forks AFB 2007 Air Emissions Inventory Report indicated that the installation generated total HAPs of 2.01 tpy. Grand Forks AFB is not a significant source of HAPs. The installation total HAP is below 10 tpy and no single source is over 2 tpy.”

As the region is in attainment status for all criteria pollutants and not under an air quality maintenance plan, no Conformity Determination is required before proceeding with any alternative.

Table 3.2-2

National Ambient Air Quality Standards (NAAQS) and ND Ambient Air Quality Standards (NDAAQS)

Pollutant	Averaging Time	NAAQS $\mu\text{g}/\text{m}^3$ (ppm) ^a		NDAAQS $\mu\text{g}/\text{m}^3$ (ppm) ^a
		Primary ^b	Secondary ^c	
O ₃	1 hr	235 (0.12)	Same	Same
	8 hr ^e	157 (0.08)	Same	None
CO	1 hr	40,000 (35)	None	40,000 (35)
	8 hr	10,000 (9)	None	10,000 (9)
NO ₂	AAM ^d	100 (0.053)	Same	Same
SO ₂	1 hr	None	None	715 (0.273)
	3 hr	None	1,300 (0.5)	None
	24 hr	365 (0.14)	None	260 (0.099)
	AAM	80 (0.03)	None	60 (0.023)
PM ₁₀	AAM	50	Same	Same
	24 hr	150	Same	Same
PM _{2.5} ^e	AAM	65	Same	None
	24 hr	15	Same	None
Pb	¼ year	1.5	Same	Same
H ₂ S	1 hr	None	None	280 (0.20)
	24 hr	None	None	140 (0.10)
	3 mth	None	None	28 (0.02)
	AAM	None	None	14 (10)
	Instantaneous	None	None	14 (10)

^a $\mu\text{g}/\text{m}^3$ – micrograms per cubic meter; ppm – parts per million^bNational Primary Standards establish the level of air quality necessary to protect the public health from any known or anticipated adverse effects of pollutant, allowing a margin of safety to protect sensitive members of the population.^cNational Secondary Standards establish the level of air quality necessary to protect the public welfare by preventing injury to agricultural crops and livestock, deterioration of materials and property and adverse impacts on the environment.^dAAM – Annual Arithmetic Mean.^eThe Ozone 8-hour standard and the PM 2.5 standards are included for information only. A 1999 federal court ruling blocked implementation of these standards, which USEPA proposed in 1997. USEPA has asked the US Supreme Court to reconsider that decision (USEPA, 2000).PM₁₀ is particulate matter equal to or less than 10 microns in diameter.PM_{2.5} is particulate matter equal to or less than 2.5 microns in diameter.

Source: 40 CFR 50, ND Air Pollution Control Regulations – North Dakota Administrative Code (NDAC) 33-15

3.3 NOISE

Noise generated on Grand Forks AFB consists mostly of aircraft, vehicular traffic and construction activity. Most noise is generated from aircraft during takeoff and landing and not from ground traffic. Noise levels are dependent upon type of aircraft, type of operations and distance from the observer to the aircraft. Duration of the noise is dependent upon proximity of the aircraft, speed and orientation with respect to the observer. As the base converts from a refueling mission to a remotely piloted aircraft mission, noise levels decline. A new noise survey will be accomplished when the conversion is complete.

Table 3.3-1 Typical Decibel Levels Encountered in the Environment and Industry			
Sound Level (dBA) ^a	Maximum Exposure Limits	Source of Noise	Subjective Impression
10			Threshold of hearing
20		Still recording studio; Rustling leaves	
30		Quiet bedroom	
35		Soft whisper at 5 ft ^b ; Typical library	
40		Quiet urban setting (nighttime); Normal level in home	Threshold of quiet
45		Large transformer at 200 ft	
50		Private business office; Light traffic at 100 ft; Quiet urban setting (daytime)	
55		Window air conditioner; Men's clothing department in store	Desirable limit for outdoor residential area use (EPA)
60		Conversation speech; Data processing center	
65		Busy restaurant; Automobile at 100 ft	Acceptable level for residential land use
70		Vacuum cleaner in home; Freight train at 100 ft	Threshold of moderately loud
75		Freeway at 10 ft	
80		Ringling alarm clock at 2 ft; Kitchen garbage disposal; Loud orchestral music in large room	Most residents annoyed
85		Printing press; Boiler room; Heavy truck at 50 ft	Threshold of hearing damage for prolonged exposure
90	8 hr ^c	Heavy city traffic	
95	4 hr	Freight train at 50 ft; Home lawn mower	
100	2 hr	Pile driver at 50 ft; Heavy diesel equipment at 25 ft	Threshold of very loud
105	1 hr	Banging on steel plate; Air Hammer	
110	0.5 hr	Rock music concert; Turbine condenser	
115	0.25 hr	Jet plane overhead at 500 ft	
120	< 0.25 hr	Jet plane taking off at 200 ft	Threshold of pain
135	< 0.25 hr	Civil defense siren at 100 ft	Threshold of extremely loud
^a dBA – decibels ^b ft – feet ^c hr - hours Source: US Army, 1978			

Table 3.3-2 Approximate Sound Levels (dBA) of Construction Equipment						
Equipment Type	Sound Levels (dBA) at Various Distances (ft)					
	50	100	200	400	800	1,600
Front-end Loader	84	78	72	66	60	54
Dump Truck	83	77	71	65	59	53
Truck	83	77	71	65	59	53
Tractor	84	78	72	66	58	52
Source: Thurman, 1976; US Army, 1978						

Because military installations attract development in proximity to their airfields, the potential exists for urban encroachment and incompatible development. The USAF utilizes a program known as AICUZ to help alleviate noise and accident potential problems due to unsuitable community development. AICUZ recommendations give surrounding communities alternatives to help prevent urban encroachment. Noise contours are developed from the Day-Night Average A-Weighted Sound Level (DNL) data which defines the noise created by flight operations and ground-based activities. The AICUZ also defines Accident Potential Zones (APZs), which are rectangular corridors extending from the ends of the runways. Recommended land use activities and densities in the APZs for residential, commercial and industrial uses are provided in the base's AICUZ study. Grand Forks AFB takes measures to minimize noise levels by evaluating aircraft operations. Blast deflectors are utilized in designated areas to deflect blast and minimize exposure to noise. New DOD Policy on EIAP and Analysis for Potential Hearing Loss is included in "Methodology for Assessing Hearing Loss Risk and Impacts in DoD Environmental Impact Analysis" which applies whenever the 80 decibel Day/Night Average Noise Level (DNL) contour extends into populated areas off base, or cantonment/residential areas on base. Any workers or visitors within fifty feet of the trucks, tractors and loaders involved in construction and removal activities will wear hearing protection.

3.4 WASTES, HAZARDOUS MATERIALS AND STORED FUELS

3.4.1 Hazardous Waste, Hazardous Material, Recyclable Material

Hazardous wastes, as listed under the RCRA, are defined as any solid, liquid, contained gaseous, or combination of wastes that pose a substantive or potential hazard to human health or the environment. On-base hazardous waste generation involves three types of on-base sites: an accumulation point (180-day), satellite accumulation points and spill cleanup equipment and materials storage. Discharge and emergency response equipment is maintained in accessible areas throughout Grand Forks AFB. The Fire Department maintains adequate fire response and discharge control and containment equipment. Equipment stores are maintained in buildings 409 and 530. Petroleum contaminated soils generated from excavations throughout the base can be treated at the land treatment facility located on Base west of the south end of the runway. These solid wastes are tilled or turned a minimum of four times a year to remediate the soils to acceptable levels.

Recyclable materials from industrial facilities are collected in the recycling facility, in building 671. Papers, cardboard and wood are collected in separate storage bins. Glass, plastics and metal cans are commingled. Curbside containers are used in housing for recyclable materials. A contractor collects these materials and transports them off Base for processing.

The Environmental Element of 319 CES manages the hazardous material through a contract with Environmental Quality Management (EQM). Typical hazardous materials include materials such as reactives, ignitables, toxics and corrosives. Improper storage can impact human health and the safety of the environment.

Asbestos poses the greatest risk when it is compromised in some way. When asbestos becomes "friable" it can release fibers into the air that cannot be seen by the naked eye. At this point, a person can inhale or ingest these asbestos fibers. The development of diseases that result from such exposure often takes years or even decades, but can result in serious and even fatal damage to the lungs, stomach, heart and other organs. Asbestos is defined by North Dakota with the following definitions.

Category I Nonfriable Asbestos-Containing Material is asbestos containing packings, gaskets, resilient floor covering and asphalt roofing products containing more than 1% asbestos.

Category II Nonfriable Asbestos-Containing Material is any material, excluding Category I nonfriable material, containing more than 1% asbestos, that when dry cannot be crumbled, pulverized, or reduced to powder by hand pressure or by mechanical forces expected to act on the material. Examples include transite cementitious asbestos pipe or board, transite siding, asbestos putties, asbestos sealants and adhesives. This defines the transite pipe in the Proposed Action as it rests underground.

Friable Asbestos Material is any material containing more than 1% asbestos, that when dry can be crumbled, pulverized, or reduced to powder by hand pressure or by mechanical forces expected to act on the material.

Regulated Asbestos-Containing Material (RACM) is (a) friable asbestos material, (b) Category I nonfriable asbestos-containing material that has become friable, or has been subjected to sanding, grinding, cutting or abrading, or (c) Category II nonfriable asbestos-containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

In the Proposed Action, the pipe near the entry points, which will be cut in order to replace new pipe and valves, will likely become RACM because it has a high probability of crumbling when it is cut or sawed. Both ends of the remaining buried sewer segments will be plugged and remain underground. A request to the ND State Department of Health for the abandonment in place of the pipe must be approved prior to initiation of the contract.

All asbestos waste removed in renovation and exposed to the air must be disposed in a permitted, lined, mixed municipal solid waste landfill or industrial landfill permitted to accept asbestos. Demolition debris landfills do not accept asbestos containing materials. The state of North Dakota requires that ACM shipped to an approved landfill be documented by a Waste Shipment Record (WSR) and a copy submitted to the State within ten days.

3.4.2 Underground and Above Ground Storage Tanks

Since Grand Forks AFB is a military installation with a flying mission, there are several aboveground and underground fuel storage tanks (ASTs and USTs).

Petroleum, oils and lubricants (POLs) are stored in twenty four (24) underground storage tanks (USTs) at GFAFB. Fifteen (15) USTs are regulated and store gasoline (4), diesel fuel (4), JP-8 (1) and waste oil (6) from oil water separators (OWS). Five (5) USTs are deferred from specific regulations and store JP-8 for the hydrant fuel system. Four (4) USTs are exempt from specific regulations and provide emergency spill containment for JP-8 or hydraulic oil. There is a 50,000 gal OWS near the main gate lift station (801) which separates sand and dirt from stormwater as it leaves the base. It is cleaned on an annual basis.

JP-8, gasoline, diesel fuel and used oil are stored in seventy-three (73) aboveground storage tanks (ASTs) at GFAFB. JP-8 is stored in six (6) ASTs with a combined capacity of 3,990,000 gallons. These six hydrant fuel system tanks each are contained by a concrete dike system. Diesel fuel for motor vehicle use is stored in four (4) ASTs with a combined capacity of 50,950 gallons. Thirty-nine (39) ASTs store diesel fuel for emergency generator use. The remaining twenty-four (24) ASTs store diesel fuel and used oil in smaller capacity tanks throughout the base. All ASTs have secondary containment. There is an AST at the main gate lift station (801) for diesel fuel for the backup generator at the lift station.

Potassium acetate used for runway deicing is stored in two 10,000-gallon ASTs. Both propylene glycol and Type IV aircraft deicing fluid is stored in 26,000-gallon and 8,600 gallon ASTs. Aircraft deicing

fluid is recovered, stored in two 19,730 gallon ASTs and shipped for recycling. There are no other tanks near the proposed construction site.

3.4.3 Solid Waste Management

Hard fill, construction debris and inert waste generated by Grand Forks AFB are disposed at a permitted off-base landfill. All on-base household garbage and solid waste is collected by a contractor and transported to the Grand Forks County Landfill, which opened a new site in 2009. The majority of construction debris is disposed at an inert landfill (permit number IT-198) four miles northeast of the base, while municipal waste and asbestos waste is disposed at the Grand Forks Landfill (SW-069) fifteen miles east of the base. GFAFB also operates a land treatment facility (IT-183) on base for the remediation of petroleum-contaminated soils (PCSs). PCSs are generated on-base through spills, or encountered while excavating for various subsurface repairs, or encountered while replacing or removing underground storage tanks and piping.

3.5 WATER RESOURCES

3.5.1 Ground Water

Chemical quality of ground water is dependent upon the amount and type of dissolved gases, minerals and organic material leached by water from surrounding rocks as it flows from recharge to discharge areas. The water table depth varies throughout the base, from a typical 1-3 ft to 10 ft or more below the surface.

Even though the Dakota Aquifer has produced more water than any other aquifer in Grand Forks County, the water is very saline and generally unsatisfactory for domestic and most industrial uses. Its primary use is for livestock watering. It is sodium chloride type water with total dissolved solids concentrations of about 4,400 ppm. The water generally contains excessive chloride, iron, sulfate, total dissolved solids and fluoride. The water from the Dakota Aquifer is highly toxic to most domestic plants and small grain crops and in places, the water is too highly mineralized for use as livestock water (Hansen and Kume, 1970).

Water from wells tapping the Emerado Aquifer near Grand Forks AFB is generally of poor quality due to upward leakage of poor quality water from underlying bedrock aquifers. It is sodium sulfate type water with excessive hardness, chloride, sulfate and total dissolved solids. Water from the Lake Agassiz beach aquifers is usually of good chemical quality in Grand Forks County. The water is a calcium bicarbonate type that is relatively soft. The total dissolved content ranges from 308 to 1,490 ppm. Most water from beach aquifers is satisfactory for industrial, livestock and agricultural uses.

Grand Forks AFB draws 100 percent of its water for industrial, commercial and housing functions from the City of Grand Forks and has backup from Agassiz Water Users, Inc.

3.5.2 Surface Water

Natural surface water features located on or near Grand Forks AFB are the Turtle River and Kellys Slough National Wildlife Refuge (NWR). Drainage from surface water channels ultimately flows into the Red River.

The Turtle River, crossing the base boundary at the northwest corner, is very sinuous and generally flows in a northeasterly direction. It receives surface water runoff from the western portion of Grand Forks AFB and eventually empties into the Red River of the North that flows north to Lake Winnipeg, Canada.

The Red River drainage basin is part of the Hudson Bay drainage system. At Manvel, ND, approximately 10 miles northeast of Grand Forks AFB, the mean discharge of the Turtle River is 50.3 cubic feet per second (ft³/s). Peak flows result from spring runoff in April and minimum flows (or no flow in some years) occur in January and February.

NDDH has designated the Turtle River to be a Class II stream; it may be intermittent, but, when flowing, the quality of the water, after treatment, meets the chemical, physical and bacteriological requirements of the NDDH for municipal use. The designation also states that it is of sufficient quality to permit use for irrigation, for propagation of life for resident fish species and for boating, swimming and other water recreation.

Kellys Slough NWR occupies a wide, marshy flood plain with a poorly defined stream channel, approximately two miles east of the main gate and downstream of Grand Forks AFB. Kellys Slough NWR receives surface water runoff from the east half of the base and effluent from the base sewage lagoons located east of the base. Surface water flow of the slough is northeasterly into the Turtle River Drainage from surface water channels ultimately flowing into the Red River. Floodplains are limited to an area 250 ft on either side of Turtle River (about 46 acres on base) and a small section of the SE corner of the lagoons. Any development in or modifications to floodplains must be coordinated with the United States Army Corps of Engineers and the Federal Emergency Management Agency (FEMA). The North Dakota State Water Commission requires that any structure in the floodplain have its lowest floor above the identified 100-year flood level.

Surface water runoff leaves Grand Forks AFB at four primary locations related to identifiable drainage areas on base. The four sites are identified as northeast, northwest, west and southeast related to the base proper. These outfalls were approved by the NDDH as stated in the Grand Forks AFB ND Pollutant Discharge Elimination System (NDPDES) Permit NDR05-0000 Stormwater Discharges from Industrial Activity. Of the four outfall locations, the west and northwest sites flow into the Turtle River, the northeast site flows to the north ditch and the southeast outfall flows into the south ditch. The latter two flow to Kellys Slough NWR and then the Turtle River. All drainage from these surface water channels ultimately flows into the Red River. The Base Bioenvironmental Engineer Office samples the four outfall locations during months when de-icing activities occur on base.

3.5.3 Waste Water

Grand Forks AFB discharges its domestic and industrial wastewater to four stabilization lagoons located east of the main base. The four separate treatment cells consist of one primary treatment cell, two secondary treatment cells and one tertiary treatment cell. Wastewater effluent is discharged under ND Permit ND-0020621 into Kellys Slough NWR. Wastewater discharge occurs for about one week, sometime between mid-April through October. Industrial wastewater at the base comprises less than ten percent of the total flow to the treatment lagoons.

3.5.4 Water Quality

According to the National Water Quality Inventory Report (USEPA, 1995), ND reports the majority of rivers and streams have good water quality. Natural conditions, such as low flows, can contribute to violations of water quality standards. During low flow periods, the rivers are generally too saline for domestic use. Grand Forks AFB receives water primarily from Grand Forks city and secondary from Lake Agassiz Water Users, Inc. The city recovers its water from the Red River and the Red Lake River, while the water association provides water from aquifers. The water association recovers water from well systems within glacial drift aquifers (USAF, 1999). The 319th Civil Engineer Squadron tests the water received on base daily for chlorine. The 319th Bioenvironmental Flight collects monthly bacteriological

samples to be analyzed at the ND State Laboratory. The Base Bioenvironmental Flight needs to be advised of any water line interruptions, including turn-ons and turn-offs.

3.5.5 Wetlands

The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

Section 404 of the Clean Water Act (Title 33, United States Code, Section 1344) establishes a program to regulate all dredging and filling activities related to jurisdictional waters and wetlands of the United States. A 404 permit from the USACE is required for actions that may impact wetlands, to include dredging, filling, and activities that may displace soil into a wetland. Applicants must submit USACE ENG Form 4345, *Application for Department of the Army Permit* to the appropriate USACE District Engineer prior to any land disturbance activity located in or near a wetland area. Along with the permit application, they must submit a vicinity map and site development plan that includes a cross-sectional view of the affected area showing limits of jurisdictional waters, the normal water level, volume of fill material to be discharged below ordinary high water, and the area of waters affected.

Section 401 of the CWA directs that any proponent of an action that requires a federal license or permit (such as a Section 404 permit) must obtain a Water Quality Certificate from the state water pollution control agency. The Water Quality Certificate certifies that the action complies with state water quality criteria. State permits to undertake projects within a specified buffer zone surrounding wetlands may also be required. When applying for a permit under state wetland protection laws, certain information not required for an USACE permit, such as a delineation of a regulated buffer area, may also be required. In some cases, permit applications may be submitted concurrently for review by both the state and the USACE.

EO 11990 requires each agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; and (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities. Prior to any construction activity in a wetland area (as defined by E. O. 11990), proponents must first prepare a Finding of No Practicable Alternative (FONPA), which documents that there are no practicable alternatives to such construction, and that the Proposed Action includes all practicable measures to minimize harm to wetlands. In preparing the FONPA, the AF must consider the full range of practicable alternatives that will meet the proposed mission requirements. If wetlands would be impacted, a FONPA must be prepared and submitted for review and approval by the Director, Installation and Mission Support prior to implementing the impacting activity.

Grand Forks County has wetland Type I (wet meadow) to Type V (open freshwater). Approximately 59,500 acres of wetland Type I to V are used for wetland habitat. Wetland Types IV and V include areas of inland saline marshes and open saline water. Kellys Slough NWR occupies a wide, marshy flood plain with a poorly defined stream channel, approximately two miles east and downstream of Grand Forks AFB. Kellys Slough NWR is the most important regional wetland area in the Grand Forks vicinity.

A wetland delineation conducted in 2004 indicated that the Base has 301 acres of wetlands contained within 192 separate wetland areas. See Figure 1.3 for locations. These include one Riverine wetland totaling 3 acres in Turtle River, one Palustrine Emergent Wetland (PEM)/Lacustrine wetland totaling 47 acres and 190 Palustrine wetlands totaling 251 acres. Of the Palustrine wetlands, 32 are Scrub-shrub wetlands at 76 acres, 3 are Forested wetlands at approximately <1 acre and 155 are Emergent wetlands at 174 acres. Fifteen wetlands have been identified as jurisdictional comprising 145 acres on base and 156 acres are non-jurisdictional. Vegetation is robust at GFAFB wetlands and many are characterized as typical prairie potholes found within the northern plains ecoregion.

Wetlands on Grand Forks AFB occur frequently in drainage ways, low-lying depressions and prairie potholes. Wetlands are highly concentrated in drainage ways leading from the wastewater treatment lagoons to Kellys Slough NWR. The majority of wetland areas occur in the northern and southwest central portions of base, near the runway, while the remaining areas are near the eastern boundary and southeastern corner of base. Development in or near these areas must include coordination with the ND State Water Commission and the USACE. To help preserve wetlands, the North Dakota, Grand Forks County regional office of the Natural Resource Conservation Service recommends a 100-ft vegetated (grass) buffer with a perimeter filter strip.

Palustrine emergent marsh (PEM) wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants and at GFAFB are dominated by cattails (*Typha species*) and smartweed (*Polygonum coccineum*) as noted in the 2004 Wetland Assessment report (CH2M HILL 2004). These species, in addition to spike-rush (*Eleocharis species*) and sedge (*Carex species*), were also the most prevalent type of wetland plants observed during this survey.

The PEM wetlands observed at the study area were partially comprised of a unique wetland system known as prairie pothole wetlands. Prairie potholes are depressional wetlands often located in the northern plains region of the U.S. and also in Canada. The potholes are the result of historical glacial activity, which left the landscape pockmarked. These potholes accumulate snowmelt and precipitation during spring-thaw conditions. Prairie pothole marshes can be temporary or may be permanent. There has been an increase in the number, average size, and permanence of prairie wetlands which began when the Midwest northern plains swung from an extreme drought in the late 1980s to an extended wet period that began in 1993 and continues today.

Along the west edge of the lagoon primary cell one is a 47 acre large palustrine/lacustrine wetland system # LS-02 with open water on the north end (see Figure 2.3). No crossing into the wetland #LS-02 is permitted during construction. This wetland is farther from the work site (greater than 40 ft from the center of the road) and should not be impacted, unless there was an unintentional discharge from heavy equipment.

The Proposed Action includes open excavation of the site at a distance approximately 40 ft from the center of the road. Excavation will include use of heavy equipment such as bulldozers trenching 10 ft wide and 12 ft deep. A wetland delineation was done specifically in the area of this project. See Figure 1.6. The two wetlands being affected by proposed replacement of the sanitary sewer are identified as follows. To the southwest of lagoon primary cell one is a 3.4 acre wetland area #LS-04 (see Figure 2.1). Results indicated that soil survey mapped soil listed as hydric criteria (Bearden silty clay loam, saline). The presence of cattail was indicative of sample site being in a transition zone from wetland to upland, with wetland to the north to road embankment to the south. The prevalence of facultative vegetation is possibly indicative of seasonably high water table. The existing transite pipe will be abandoned in place, and two new parallel lines of PVC pipe shall be installed by trenching 10 ft wide and 12 ft deep which is very near to wetland site #LS-04. Prior to construction, the contractor will stake and flag the existing

wetlands. Stakes are to remain in place until construction is complete. The southern border of the 3.4 acre wetland shall be flagged around the perimeter to notify construction personnel not to enter the site so as to avoid wetland impacts. The construction site has potential for heavy equipment and excavation efforts to affect wetlands by unintentional discharge. Silt fencing in this area shall be installed around the construction zone to prevent discharge to the 3.4 acre wetland and to the adjacent drainage ditch leading to east of the lagoons.

Based on the Section 404 permit submitted by the Base, the USACE has estimated that 0.05 acre of aquatic resource will be impacted on the southern edge of #LS-04. The Corps made a preliminary determination that the project affected two wetlands that are jurisdictional. Because this Proposed Action is a linear project crossing a water body two times at separate and distant locations, each crossing is considered a single and complete project. Each wetland affected is considered a project, and because the affected acreage of each wetland is less than 1/10th of an acre the Base does not have to mitigate under Nationwide Permit #12. The Base is not required to submit a preconstruction notification (PCN) because the Proposed Action did not meet the listed criteria on page 2 of the NWP #12 fact sheet enclosed in Appendix D. The Base must follow the BMPs listed in the permit.

Along the south edge of the lagoon primary cell one is a 0.07 acre roadside wetland ditch #LS-05 (see Figure 2.2). Excavation for pipe removal and replacement will take place directly in #LS-05 and will directly impact this roadside wetland. The work includes removal and replacement of existing sanitary sewer force main transite pipe with PVC pipe. Excavation affecting this small ditch-wetland shall be addressed by bringing the original ditch elevation back to grade so that no permanent fill of the ditch shall remain. Removed vegetation shall be reseeded at the project's end with appropriate wet meadow forbes and grass seed. Because the area leading to the lagoon is relatively surrounded by wetlands and a road, there is no practicable alternative to siting the replacement pipe within this small roadside wetland. Application for a Section 404 permit was made to the USACE and they instructed the Base to utilize and adhere to nationwide permit #12. With the ditch wetland restored to original elevation and vegetation, and the project less than 1/10th of an acre, there will be no other mitigation required.

3.5.6 Floodplains

The shape of the Red River Valley has resulted from past glacial activity. Flooding usually lasts only for a short period because of a vast network of drainage ditches and channelized streams, such as the Turtle River which flows across the northwest corner of the Base. The Red River has several basin characteristics that make it susceptible to flooding, including an undersized main channel in relation to its floodplain, a small main channel gradient and a northerly flow that synchronizes flooding with the northerly progression of the spring thaw. Floods typically occur during late spring resulting from quick temperature rise, spring rains, snowmelt and soil-moisture content held over from the fall. Review of the National Flood Insurance Rate Map (FIRM) indicates that a small portion of the Turtle River's 100-year floodplain is located in the extreme northwest corner of the base where the river crosses the Grand Forks AFB boundary. There is another small portion of the county's natural floodplain drainage that crosses the southeast corner of the Grand Forks AFB lagoons on its way to Kellys Slough NWR. No floodplains are present in the proposed sanitary sewer site.

3.6 BIOLOGICAL RESOURCES

3.6.1 Vegetation

Hay land, wildlife management areas, waterfowl production areas, neighboring wildlife refuges, state parks and conservation reserve program land have created excellent grassland and wetland habitats for

wildlife in Grand Forks County. Pastures, meadows and other non-cultivated areas create a prairie-land mosaic of grasses, legumes and wild herbaceous plants. Included in the grasses and legumes vegetation species are tall wheat grass, brome grass, Kentucky bluegrass, sweet clover and alfalfa. Herbaceous plants include little bluestem, goldenrod, green needle grass, western wheat grass and bluegrama. Shrubs such as Juneberry, dogwood, hawthorn, buffaloberry and snowberry also are found in the area. In wetland areas, predominant species include Typha species, smartweed, wild millet, cord grass, bulrushes, sedges and reeds. These habitats for upland wildlife and wetland wildlife attract a variety of species to the area and support many aquatic species.

Various researchers, most associated with the University of ND, have studied current native floras in the vicinity of the base. The Natural Heritage Inventory through field investigations has identified ten natural communities occurring in Grand Forks County (1994). Of these, two communities are found within base boundaries, River/Creek and Lowland Woodland. The River/Creek natural community refers to the Turtle River. This area is characterized by submergent and emergent aquatic plants, green algae, diatoms, diverse invertebrate animals such as sponges, flatworms, nematode worms, segmented worms, snails, clams and immature and adult insects, fish, amphibians, turtles and aquatic birds and mammals. Dominant trees in the Lowland Community include elm, cottonwood and green ash. Dutch elm disease has killed many of the elms. European buckthorn (a highly invasive exotic species), chokecherry and wood rose (*Rosa woodsii*) are common in the under story in this area. Wood nettle (*Laportea canadensis*), stinging nettle (*Urtica dioica*), beggars' ticks (*Bidens frondosa*) and waterleaf (*Hydrophyllum virginianum*) are typical forbes.

A prairie restoration project in the "Prairie View Nature Preserve" has been developed to restore a part of the native tallgrass prairie that once was dominant in this region. Plants thriving in this preserve include big bluestem, little bluestem, Indian grass, switchgrass, blue gramma, buffalo grass and many native wildflower species. The Grand Forks AFB Natural Resources Manager and volunteers installed a butterfly garden within the Prairie View Nature Preserve in the fall of 2005, on National Public Lands Day. Volunteers helped plant the 1,300 square foot garden with about 50 different perennial varieties and shrubs.

3.6.2 Wildlife

Grand Forks County is agrarian in nature, however it does have many wildlife management areas, waterfowl production areas, conservation reserve program land and recreational areas providing excellent habitat for local wildlife within the county. Kellys Slough NWR is located a couple miles northeast of Grand Forks AFB. In addition to being a wetland, it is a stopover point for thousands of migratory birds, especially shorebirds. The Prairie Chicken Wildlife Management Area is located north of Mekinock and the base, and contains 1,160 acres of habitat for deer, sharp-tailed grouse and game birds. Wildlife can also be found at the Turtle River State Park, the Bremer Nature Trail and the Myra Arboretum.

The base supports a remarkable diversity of wildlife given its size and location within an agricultural matrix. The Turtle River riparian corridor, Prairie View Nature Preserve, grassland areas on the west side of the base and the lagoons to the east of the base all provide important habitat for native plant and wildlife species and should be conserved as such within mission constraints. Many mammalian species are found on base such as the white tail deer, eastern cottontail rabbit, coyotes, beaver, raccoons, striped skunks, badgers, voles, gophers, shrews, mice, muskrat, squirrels, bats and occasional moose and bear. Amphibian State Species of Concern include the Northern Leopard Frog. Mammal State Species of Concern include the bobcat, moose and black bear.

One hundred seventy bird species were identified in the 2004 biological survey, many of which include grassland bird species. Grassland bird populations are declining across North America due to huge losses

of prime grassland habitat from conversion to agricultural, urban and industrial development. No other avian group has experienced such dramatic losses as grassland birds. GFAFB is fortunate to support a large variety of grassland birds, many of which are listed on the Partners-in-Flight species of concern list, such as the grasshopper sparrow. Large blocks of grassland should be conserved to protect these grassland bird species when the mission constraints allow it. Best management practices (BMPs) to restrict construction and removal actions during nesting season are implemented to reduce the amount of disruption to birds and wildlife.

3.6.3 Threatened and Endangered Species

No federal-threatened and endangered species have been observed on Grand Forks AFB. However, several rare and state-listed species have been observed on base near Turtle River, the lagoons and the grassland to the west of the airfield. The Endangered Species Act does require that Federal Agencies not jeopardize the existence of a federal-threatened or endangered species nor destroy or adversely modify designated critical habitat for federal-threatened or endangered species.

According to the GFAFB Migration and Breeding Bird Survey, 2007, the following birds have been found on the installation: 18 Birds of Conservation Concern (USFWS 2002), 8 birds on the North Dakota Threatened or Endangered Species, ND Natural Heritage Inventory (Ranks S1-S3), 32 birds on the ND Species of Concern, ND Natural Heritage Inventory, 35 birds on the Partners in Flight Bird Conservation Plan for the Northern Tallgrass Prairie (Physiographic Area 40), 1998 and 29 birds on the ND Special Programs, Comprehensive Wildlife Conservation Strategy, 100 Species of Conservation Priority, 2004. Table 3.6-1 was mandated for inclusion in the Integrated Natural Resources Management Plan (INRMP) and management is required for these species. Therefore, base activities that affect them must be assessed following the Sikes Act. The INRMP was signed by the Installation Commander on March 21, 2006. The INRMP defines natural resources management goals and objectives that are consistent with the military mission and ensure no net loss in the capability of installation lands to support the military mission. The main goal of ecosystem management on GFAFB is to maintain and improve the sustainability and biological diversity of unique native ecosystems while supporting the specific military mission of GFAFB.

Numerous migrating and breeding birds utilize the variety of habitats on the installation. There are several species of birds that use the property for migratory stopover sites and many other species that breed on the installation (GFAFB Migration and Breeding Bird Survey, 2007). All of the birds listed below are identified in the INRMP and were found and documented on the GFAFB bird checklist (GFAFB 2008). To date, 216 species of birds have been identified as present on base property.

Two hundred and fifty five taxa were identified in the ND Natural Heritage Inventory and the biological inventory update for Grand Forks Air Force Base. Two rare orchid species, the Large and Small Yellow Lady's Slipper, are known to exist on Grand Forks AFB. These state-threatened plants were identified during the 2004 inventory. BMPs to restrict construction and removal actions within the area are implemented to reduce the amount of disruption to natural resources. The Large and Small Yellow Lady's Slippers are found on the west side of the base airfield in unimproved area and are not near the proposed site of the sanitary sewer.

INRMPs will provide for the protection and conservation of state-listed protected species when practicable. Although not required by the Endangered Species Act, similar conservation measures for species protected by state law are provided when such protection is not in direct conflict with the military mission. When conflicts occur, the appropriate state authority, North Dakota Game and Fish, is consulted to determine if any conservation measures can be feasibly implemented to mitigate impacts.

The location of the proposed sanitary sewer project is in a semi-improved area of the base, and is near the lagoons where state-threatened and state-species of concern are most likely to appear. The Proposed Action takes place in the southwest corner of the lagoons and there are another 500 acres of lagoon water, wetland and meadow in the adjacent area for habitat to support wildlife and T&E species.

Table 3.6-1						
GFAFB Bird Conservation Species						
	Federal T&E	BCC 2002	State T&E	State SC	PIF	State CWCS
Alder Flycatcher				X		
American Avocet					X	X
American Bittern		X			X	X
American White Pelican						X
American Woodcock				X		
Baird's Sparrow		X		X	X	X
Bald Eagle			X			X
Black Tern				X	X	X
Black-billed Cuckoo		X			X	X
Black-billed Magpie					X	
Blue-headed Vireo				X		
Bobolink					X	X
Brewer's Sparrow			X			X
Brown Creeper					X	
Bufflehead				X		
Canada Warbler				X		
Canvasback					X	X
Chestnut-collared Longspur		X		X	X	X
Chestnut-sided Warbler			X			
Clay-colored Sparrow					X	
Common Loon				X		
Common Merganser				X		
Common Tern				X		
Cooper's Hawk				X		
Dickcissel					X	X
Eastern Bluebird				X		
Ferruginous Hawk		X		X	X	X
Forster's Tern				X		
Franklin's Gull				X	X	X
Grasshopper Sparrow		X			X	X
Green Heron			X			
Harris's Sparrow					X	
Hooded Merganser			X			
Horned Grebe						X
Killdeer					X	
Lark Bunting					X	X
Le Conte's Sparrow		X		X	X	X
Loggerhead Shrike		X		X	X	X
Mallard					X	
Marbled Godwit		X		X	X	X

Marsh Wren					X	
Mourning Warbler				X		
Nelson's Sharp-tailed Sparrow		X		X	X	X
Northern Harrier		X			X	X
Northern Pintail				X	X	X
Northern Waterthrush				X		
Olive-sided Flycatcher				X		
Orange-crowned Warbler				X		
Osprey				X		
Pileated Woodpecker			X			
Redhead					X	X
Red-breasted Nuthatch				X		
Ruddy Duck					X	
Scarlet Tanager				X		
Sedge Wren					X	X
Sharp-tailed Grouse						X
Short-eared Owl		X				X
Solitary Sandpiper		X				
Swainson's Hawk		X		X	X	X
Swamp Sparrow			X			
Turkey Vulture				X		
Upland Sandpiper		X		X	X	X
Virginia Rail					X	
Whip-poor-will				X		
White-rumped Sandpiper		X				
White-throated Sparrow			X			
Willet		X		X	X	X
Wilson's Phalarope		X			X	X
Yellow-headed Blackbird					X	
Totals	0	18	8	32	35	29
Federal T&E = US Fish and Wildlife Service, Threatened and Endangered Species System, 2005						
BCC 2002 = Birds of Conservation Concern 2002, US Fish and Wildlife, Division of Migratory Bird Management, 2002						
State T&E = North Dakota Threatened or Endangered Species, North Dakota Natural Heritage Inventory, (Ranks S1-S3), 2005						
State SC = North Dakota Species of Concern, ND Natural Heritage Inventory, 2005						
PIF = Partners in Flight Bird Conservation Plan for the Northern Tallgrass Prairie (Physiographic Area 40), 1998						
State CWCS = North Dakota Special Programs, Comprehensive Wildlife Conservation Strategy, 100 Species of Conservation Priority, 2004						

3.7 SOCIOECONOMIC RESOURCES

Grand Forks County is primarily an agricultural region and, as part of the Red River Valley, is one of the world's most fertile. Cash crops include sugar beets, beans, corn, barley and oats. The valley ranks first in the nation in the production of potatoes, spring wheat, sunflowers and durum wheat. Grand Forks County's population was 66,414 in 2009. It was 66,109 in 2000; a decrease of 6.5 percent from the 1990 population of 70,638 (ND State Data Center, No Date). Grand Forks County's annual median household income in 2009 was \$58,784. Grand Forks AFB is one of the largest employers in Grand Forks County. The total base population, as of Sept 2009, is approximately 5,084. Of that, 1,784 are military, 2,254 are military dependents, 376 appropriated fund (APF) civilians, 31 are Dept of Homeland Security, and 639 other civilians working on base (Grand Forks AFB, 2009). The total annual economic impact for Grand Forks AFB is \$310,179,256.

3.8 CULTURAL RESOURCES

According to the Grand Forks AFB Cultural Resources Management Plan, there are no archeological sites that are potentially eligible for the National Register of Historic Places (NRHP). A total of six archeological sites and six archeological find spots have been identified on the base. They are abandoned farmsteads and isolated artifacts. None meet the criteria of eligibility of the NRHP established in 36 CFR 60.4. There is no evidence for Native American burial grounds on the installation. There could be cultural sensitive areas found within areas identified on the cultural resource probability map (Figure 3.1). Due to the potential for the presence of buried prehistoric sites, paleosols (soil that developed on a past landscape) remain a management concern. Reconnaissance-level archival and archeological surveys of Grand Forks AFB conducted by the University of ND in 1989 indicated that there are no facilities (50 years or older) that possess historical significance. Several of the base buildings have reached the age of 50 years and are pending evaluation in FY10 by contract under the NHPA, Section 110. Murals and other artwork painted on walls throughout base buildings are considered cultural resources and must be preserved and consultation completed with the State Historic Preservation Officer (SHPO) per the National Historic Preservation Act. Prior to painting/removing artwork in base buildings, the actions must first be coordinated with the ND SHPO. Consultation under NHPA, Section 106 regarding the proposed demolition of MSA buildings (703, 704 and 714) occurred with the ND SHPO and a determination was made that no historic properties would be affected. Cold War Era Buildings 313, 705, 706 and 707 that are potentially eligible for the NHPA are managed as eligible for the NHPA under the guidance of the NDSHPO approved ICRMP signed by the Wing Commander. The location of the sanitary sewer project is in an area previously disturbed when installing the original sanitary sewer. The nearest Cold War Era Building 313 is one half mile from the main gate.

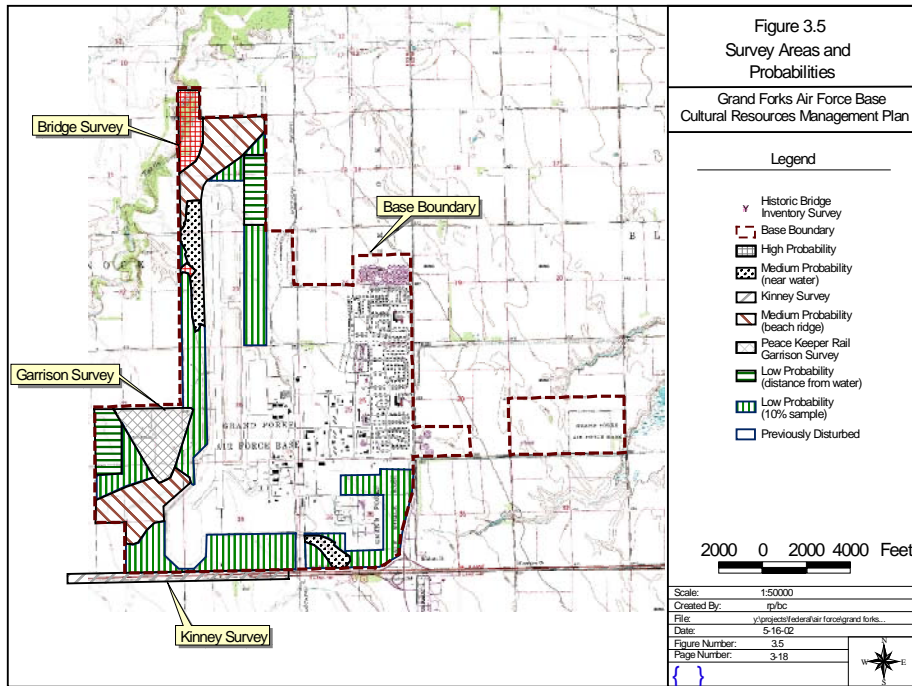


Figure 3.1 Cultural Resource Probability Areas

3.9 LAND USE

Land use in Grand Forks County consists primarily of cultivated crops with remaining land used for pasture and hay, urban development, recreation and wildlife habitat. Principal crops are spring wheat, barley, sunflowers, potatoes and sugar beets. Turtle River State Park, developed as a recreation area in Grand Forks County, is located about five miles west of the base. Several watershed protection dams, such as Larimore Dam to the west of GFAFB, are being developed for recreation activities including picnicking, swimming and ball fields. Kellys Slough National Wildlife Refuge (located about two miles east of the base) and the adjacent National Waterfowl Production Area are managed for wetland wildlife and migratory waterfowl, but they also include a significant acreage of open land wildlife habitat. There are several Works Progress Administration (WPA), National Wildlife Refuge (NWR), Wildlife Management Area (WMA), University of North Dakota (UND) land, and Conservation Reserve Program (CRP) land all available for wildlife habitat. There are increasing fisher populations, deer, coyote, many active hunters and an active bird club in the county.

The main base encompasses 5,773 acres, of which the USAF owns 5,161 acres and another 612 acres are lands containing easements, permits and licenses. Improved grounds, consisting of all covered area (under buildings and sidewalks), land surrounding base buildings, the 9-hole golf course, recreational ball fields and the family housing area, encompass 1,120 acres. Semi-improved grounds, including the airfield, fence lines and ditch banks, skeet range and riding stables account for 1,390 acres. The remaining 3,263 acres of the installation consist of unimproved grounds. These areas are comprised of woodlands, open space and wetlands, including four lagoons (180.4 acres) used for the treatment of base wastewater. Agricultural out leased land (576 acres) is also classified as unimproved. Land use at the base is twenty percent urban in nature, with residential development to the east, and cropland, hayfields and pastures in the north, west and east of the base footprint.

3.10 TRANSPORTATION SYSTEMS

Seven thousand vehicles per day travel ND County Road B3 from Grand Forks AFB's east gate to the US Highway 2 Interchange (Clayton, 2001). Two thousand vehicles per day use the off-ramp from US Highway 2 onto ND County Road B3 (Dunn, 2001). US Highway 2, east of the base interchange, handles 10,800 vehicles per day. A four lane arterial road has a capacity of 6,000 vehicles per hour and a two lane road has capacity of 3,000 vehicles per hour, based on the average capacity of 1,500 vehicles per hour per lane. Roadways adjacent to Grand Forks AFB are quite capable of accommodating existing traffic flows.

Grand Forks AFB has good traffic flow even during peak hours (6-8 am and 4-6 pm). There are two gates: the main gate located off of County Road B3, about one mile north of U.S. Highway 2 and the Secondary Gate located off of U.S. Highway 2, about 3/4 mile west of County Road B3. The main gate (gate 1) is connected to Steen Boulevard (Blvd), which is the main east-west road and serves the passenger traffic. The south gate (gate 2) is connected to Eielson Street (St), which is the main north-south road and serves the truck traffic.

3.11 AIRSPACE/AIRFIELD OPERATIONS

3.11.1 Aircraft Safety

Bird Aircraft Strike Hazard (BASH) is a significant safety concern for military aircraft. The focus of the BASH program is to prevent wildlife-related aircraft mishaps and reduce the potential for wildlife hazards to aircraft operations. Collision with birds may result in aircraft damage and aircrew injury, which may result in high repair costs or loss of the aircraft. A BASH hazard exists at Grand Forks AFB and its vicinity, due to resident and migratory birds and whitetail deer. Daily and seasonal bird movements create various hazardous conditions. Vegetation is mowed to detract birds or animals on the flight line. Although BASH problems are insignificant on Grand Forks AFB, Kellys Slough NWR two miles east of the base is a major stopover for migratory birds. Canada Geese and other large waterfowl have been seen in the area (USAF, 2001b).

Wetland areas provide the basic needs for many wildlife species and thus create potential hazards to aircraft operations. Innovative techniques to manage wildlife in wetlands are explored and implemented, such as bird depredation, bow hunting and deer drives. Legally defensible actions to reduce the amount of wetlands on the airfield to the maximum extent possible should be explored and pursued when their presence conflicts with the flight mission. While "no net loss" of wetlands is an important AF goal, priority must be given to flight safety.

3.11.2 Airspace Compatibility

The primary objective of airspace management is to ensure the best possible use of available airspace to meet user needs and to segregate requirements that are incompatible with existing airspace or land uses. The Federal Aviation Administration has overall responsibility for managing the nation's airspace and constantly reviews civil and military airspace needs to ensure all interests are compatibly served to the greatest extent possible. Airspace is regulated and managed through use of flight rules, designated aeronautical maps and air traffic control procedures and separation criteria.

3.12 SAFETY AND OCCUPATIONAL HEALTH

Safety and occupational health issues include one-time and long-term exposure. Examples include asbestos/radiation/chemical exposure, explosives safety quantity-distance and bird/wildlife aircraft hazard. Safety issues include injuries or deaths resulting from a one-time accident. Aircraft Safety includes information on birds/wildlife aircraft hazards and the BASH program. Health issues include long-term exposure to chemicals such as asbestos and lead-based paint. Safety and occupational health concerns could impact personnel working on the project and in the surrounding area.

The National Emission Standards for Hazardous Air Pollutants (NESHAP) of the CAA designates asbestos as HAP. OSHA provides worker protection for employees who work around or asbestos containing material (ACM). Regulated ACM (RACM) includes thermal system insulation (TSI), any surfacing material and any friable asbestos material. Non-regulated Category I non-friable ACM includes floor tile and joint compound. Category II material is defined as all remaining types of non-friable ACM not included in Category I that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable asbestos-cement products such as transite are an example of Category II material. If the transite pipe is left in place or removed in such a way that it is not crumbled, pulverized or reduced to powder, it would not be subject to the NESHAP. Although the intent is to avoid any crushing, if the transite pipe is crushed, the creation of an active waste disposal site can be avoided by removing the pipe from the site and transporting it to a landfill which accepts asbestos waste material.

Lead exposure can result from paint chips or dust or inhalation of lead vapors from torch-cutting operations. This exposure can affect the human nervous system. Due to the size of children, exposure to lead-based paint is especially dangerous to small children. OSHA considers all painted surfaces in which lead is detectable to have a potential for occupational health exposure.

Repairmen of pipe leaks are exposed to raw sewage. Sewage or wastewater is waterborne human, domestic and industrial wastes. It may include industrial effluent, subsoil or surface waters. Human wastes include fecal material. Domestic wastes include food wastes and wash water. The composition of microorganisms varies according to the source of waste water. Sewage water normally is comprised of fungi, protozoa, algae, bacteria and viruses. Raw sewage contains millions of bacterial milliliter including coliforms, streptococci, anaerobic spore forming bacteria, *Proteus*, etc. Soil-borne bacteria include *Bacillus subtilis*, *B. megaterium*, *B. mycoides*, *Pseudomonas fluorescens*, *Achromobacter* and *Micrococcus* species. Bacteria of intestinal origin which are harmless include *E. coli*, *Proteus* and *Serratia* and the bacteria of pathogenic ones include enterococci, *Clostridium perfringens*, *Vibrio cholerae*, *Salmonella typhi*, *Salmonella paratyphi*, and *Shigella dysenteriae*. Viruses causing poliomyelitis, infectious hepatitis and Coxsackie, excreted in feces of infected hosts, are seen in sewage.

3.13 ENVIRONMENTAL MANAGEMENT

3.13.1 ENVIRONMENTAL RESTORATION PROGRAM

The Installation Restoration Program (IRP) is the AF's environmental restoration program based on the CERCLA. CERCLA provides for Federal agencies with the authority to inventory, investigate and clean up uncontrolled or abandoned hazardous waste sites. There are seven IRP sites at Grand Forks AFB. These sites are identified as potentially impacted by past hazardous material or hazardous waste activities. They are the Fire Training Area/Old Sanitary Landfill Area, FT-02; New Sanitary Landfill Area, LF-03; Strategic Air Ground Equipment (SAGE) Building 306, ST-04; Explosive Ordnance Detonation Area, OT-05; Refueling Ramps and Pads, Base Tanks Area, ST-06; POL Off-Loading Area, ST-07; and Refueling Ramps and Pads, ST-08 (USAF, 1997b). Two sites, OT-05 and ST-06, are considered closed. ST-08 has had a remedial investigation/feasibility study (RI/FS) completed and the rest are in long-term monitoring. Grand Forks AFB is not on the National Priorities List (NPL). The preferred alternative is not near nor will it disturb any IRP sites.

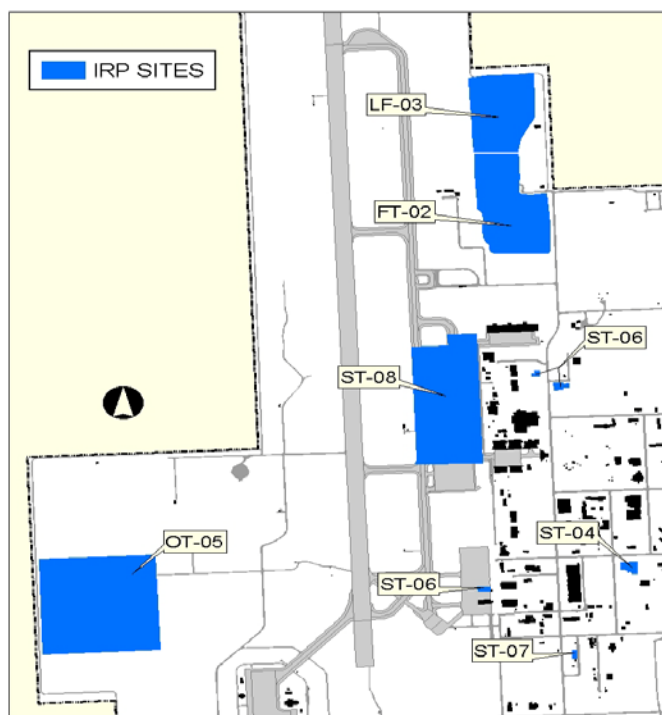


Figure 3.3 IRP Sites

3.13.2 GEOLOGICAL RESOURCES

3.13.2.1 Physiography and Topography

The topography of Grand Forks County ranges from broad, flat plains to gently rolling hills that were produced mainly by glacial activity. Local relief rarely exceeds 100 ft in one mile and, in parts of the lake basin, less than five feet in one mile.

Grand Forks AFB is located within the Central Lowlands physiographic province. The topography of Grand Forks County and the entire Red River Valley, is largely a result of the former existence of Glacial Lake Agassiz, which existed in this area during the melting of the last glacier, about 12,000 years ago (Stoner et al., 1993). The eastern four-fifths of Grand Forks County, including the base, lies in the Agassiz Lake Plain District, which extends westward to the Pembina escarpment in the western portion of the county. The escarpment separates the Agassiz Lake Plain District from the Drift Plain District to the west. Glacial Lake Agassiz occupied the valley in a series of recessive lake stages, most of which were sufficient duration to produce shoreline features inland from the edge of the lake. Prominent physiographic features of the Agassiz Lake Plain District are remnant lake plains, beaches, inter-beach areas and delta plains. Strandline deposits, associated with fluctuating lake levels, are also present and are indicated by narrow ridges of sand and gravel that typically trend northwest-southwest in Grand Forks County.

Grand Forks AFB lies on a large lake plain in the eastern portion of Grand Forks County. The lake plain is characterized by somewhat poorly drained flats and swells, separated by poorly drained shallow swells and sloughs (Doolittle et al., 1981). The plain is generally level, with local relief being less than one foot. Land at the base is relatively flat; with elevations ranging from 880 to 920 ft mean sea level (MSL) and averaging about 890 ft MSL. The land slopes to the north at less than 12 feet per mile. The sanitary sewer site sits at 893 feet.

3.13.2.2 Soil Type Condition

Soils consist of the Gilby loam series that are characterized by deep, somewhat poorly drained, moderately to slowly permeable soils in areas between beach ridges. The loam can be found from 0 to 12 inches. From 12 to 26 inches, the soil is a mixture of loam, silt loam and very fine sandy loam. From 26 to 60 inches, the soil is loam and clay loam.

3.13.3 Pesticide Management

Pesticides are handled at various facilities including Environmental Controls, Golf Course Maintenance and Grounds Maintenance. Other organizations assist in the management of pesticides and monitoring or personnel working with pesticides. Primary uses are for weed and mosquito control. Herbicides, such as picloram, nonselective glyphosate and 2, 4-D are used to maintain areas on base. Pesticides Trumpet and Altosid are used for aerial spraying for mosquito control. Military Public Health and Bioenvironmental Engineer provide information on the safe handling, storage and use of pesticides. Military Public Health maintains records on all pesticide applicators. The Fire Department on-base provides emergency response in the event of a spill, fire, or similar type incident.

3.14 ENVIRONMENTAL JUSTICE

Environmental justice addresses the minority and low-income characteristics of the area, in this case Grand Forks County. The county is more than 93 percent Caucasian, 2.3 percent Native American, 1.4 percent African-American, 1 percent Asian/Pacific Islander, less than 1 percent Other and 1.6 percent "Two or more races". In comparison, the US is 75.2 percent Caucasian, 12.3 African-American, 0.9 percent Native American or Native Alaskan, 3.6 percent Asian, 0.1 Native Hawaiian or Pacific Islander, 5.5 percent Other and 2.4 percent "Two or more races". Approximately 12.5 percent of the county's population is below the poverty level in comparison to 13.3 percent of the state (US Bureau of the Census, 2002). There are few residences and no concentrations of low-income or minority populations around Grand Forks AFB.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

This chapter discusses the potential for significant impacts on the human and natural environment. The effects of the Proposed Action and the Alternatives on the affected environment are discussed in this section.

4.2 AIR QUALITY

4.2.1 Alternative 1 - No Action

No new impacts to air quality would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons.

4.2.2 Alternative 2 - Proposed Action

Air quality is considered good and the area is in attainment for all criteria pollutants. Short-term effects of the proposed construction and removal involve heavy construction equipment and vehicular traffic emissions which are not significant as they are mobile sources. Fugitive dust would be generated and is mentioned on our Title V permit. To reduce temporary impacts to air quality, dust abatement measures, such as watering disturbed areas and roads, and wetting the ACM pipe with a fine mist of amended water prior to cutting and removal and wrapping in a 6-mil polyethylene bag, would be implemented to reduce the amount of these emissions. Fugitive emissions from construction activities are expected to be below the regulatory threshold and would be managed in accordance with NDAC 33-15-17-03. BMPs to reduce fugitive emissions would be implemented to reduce the amount of these emissions. North Dakota Department of Health requires that all necessary measures must be taken to minimize fugitive dust emissions created during construction activities.

As the region is in attainment status for all criteria pollutants and not under an air quality maintenance plan, no Conformity Determination is required before proceeding with any alternative. Provided measures to abate dust are used, the Proposed Action would have insignificant impact on Air Quality.

4.2.3 Alternative 3 – Alternative Action

Insignificant impacts to air quality from the alternative action would be similar to those generated and described under the Proposed Action at 4.2.2.

4.3 NOISE

4.3.1 Alternative 1 - No Action

No new impacts to noise would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons.

4.3.2 Alternative 2 -Proposed Action

Significant impacts from noise would not be expected. There are no sensitive noise receptors (e.g., residential areas, hospitals, churches) within 4,000 feet of the project areas. Impacts associated with the noise of construction and removal activities and operation of heavy equipment would be insignificant,

temporary and cease at the completion of these activities, within an estimated 100 days. North Dakota Department of Health recommends that noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order and ensuring that construction and removal activities are not conducted during early morning or late evening hours. Any workers or visitors within fifty feet of the trucks, tractors and loaders involved in construction and removal activities would wear hearing protection to protect for hearing loss because the 80 decibel Day/Night Average Noise Level (DNL) contour extends into the cantonment areas on base during equipment operation. Provided best management practices are used, the Proposed Action would have insignificant impact on Noise.

4.3.3 Alternative 3 – Alternative Action

Insignificant impacts to Noise from the Alternative Action would be similar to those generated and described under the Proposed Action at 4.3.2.

4.4 WASTES, HAZARDOUS MATERIALS and STORED FUELS

4.4.1 Alternative 1 - No Action

No new impacts to hazardous waste, materials and stored fuels would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons.

4.4.2 Alternative 2 - Proposed Action

The increase in hazardous and solid wastes from construction of a new sanitary sewer would be temporary. Short-term adverse impacts are expected as the increase in solid wastes from construction and removal actions would include an estimated 129,000 pounds of transite pipe and valve debris containing ACM at the entrance/exit points at Building 801 and the lagoon. Solid waste municipal waste and asbestos waste would be properly manifested and disposed in an approved location, such as the Grand Forks Municipal Landfill (SW-069), which is located within 12 miles of the proposed site, or the new Grand Forks Landfill location, opened in October 2009. Inert construction debris, other than the transite pipe, could be disposed at an inert landfill, such as one located four miles from the base, with permit number IT-198. All solid waste materials would be managed and transported in accordance with the state's solid and hazardous waste rules. Appropriate efforts to reduce, reuse and/or recycle waste materials are encouraged by the State of North Dakota. Inert waste should be segregated from non-inert waste, where possible, to reduce the cost of waste management.

Asbestos-cement products, such as transite, are commonly used for pipes, duct insulation, and siding. Being a Category II non-friable ACM, asbestos-cement products need to be removed prior to construction if they have a high probability of becoming crumbled, pulverized, or reduced to powder during removal activities. Most removal activities involving heavy equipment will subject such Category II non-friable ACM to the regulation. Whether asbestos-cement products are subject to the asbestos NESHAP should be determined by the owner or operator on a case-by-case basis based on the removal techniques to be used. In general, if contractors carefully remove asbestos-cement materials using tools that do not cause dust and damage, the materials are not considered RACM and can be disposed with other construction debris. However, if removal is accomplished through the use of heavy equipment, cutting or drilling tools, asbestos-cement products will be crumbled, pulverized or reduced to powder, and is subject to the provisions of the asbestos NESHAP. Damaged asbestos-cement products will be handled as RACM; if mixed and disposed with other demolition debris, it is in direct violation of the waste-disposal provisions of the asbestos NESHAP.

The removal contractor must follow the procedures of the Asbestos Removal and Disposal Plan of the contract. An inspector must be retained to survey each area and place the firm's ND license information on the demo notification form. The quantity of RACM for removal must be determined by the certified inspector and stated on the demo form. Only RACM is required to be removed prior to construction. The quantity of non-friable material remaining in the ground must be assessed by the inspector and stated on the demolition form. A request to the ND State Department of Health for the abandonment in place of the pipe must be approved prior to initiation of the contract. ND Department of Health requires that all necessary measures must be taken to minimize the disturbance of any asbestos-containing material and to prevent any asbestos fiber release episodes. The state of North Dakota requires that ACM shipped to an approved landfill be documented by a Waste Shipment Record (WSR) and a copy submitted to the State within ten days.

Petroleum-contaminated soils (PCSs) unintentionally generated from construction would be treated at the land treatment facility (IT-183) located on the southwest side of the airfield. It is unlikely PCSs will be encountered over the course of activities as described in the Proposed Action.

Provided BMPs are used, especially those with removal and disposal of asbestos, the Proposed Action impacts associated with the use of hazardous waste, materials and stored fuels of construction and removal activities and operation of equipment would be temporary and cease at the completion of these sanitary sewer force main replacement activities.

4.4.3 Alternative 3 – Alternative Action

This Alternative Action would generate 3,645 LF of transite pipe, a Category II non-friable ACM, asbestos-cement products needing disposal in an approved landfill. Short-term adverse impacts are expected as the increase in solid wastes from construction and removal actions would include an estimated 536,000 pounds of transite pipe and valve debris containing asbestos. This would greatly increase the cost for disposal and the cost of labor. It could increase the probability of solid waste issues due to the additional ACM handling and shipping to a permitted landfill. Operators must still be diligent to minimize the disturbance of any asbestos-containing material to prevent any asbestos fiber release episodes.

4.5 WATER RESOURCES

4.5.1 Alternative 1 - No Action Alternative

No new impacts to groundwater, surface water, wastewater, water quality, or wetlands would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons.

4.5.2 Alternative 2 - Proposed Action

4.5.2.1 Groundwater: Excavation during removal and construction could potentially intersect the shallow water table. If the excavated area fills with groundwater, water could be directly exposed to contaminants unintentionally released from construction equipment. This water would need to be pumped from the excavation, treated and discharged as surface water in accordance with Federal, State and local regulations. Erosion control plans would be required to minimize the amount of soil and sediment entering the water during construction and permits would be required for the discharge of the water. The acquisition of the discharge permit would be part of the design and construction process. Provided BMPs are followed, there would be insignificant impacts on ground water. No long-term significant impacts are anticipated.

4.5.2.2 Surface Water: Surface water quality could be degraded during actual construction in the immediate area. The short-term effects come from possible erosion contributing to turbidity of runoff and possible contamination from accidental spills or leaks from construction equipment. The contractor must utilize effective methods to control surface water runoff and minimize erosion. Proper stabilization and seeding the site immediately upon completion of the construction would provide beneficial vegetation, controlling erosion. Provided BMPs are utilized during construction and site reclamation, negative surface water impacts should be insignificant. Long-term significant impacts are not anticipated.

4.5.2.3 Storm Water: In the short-term, construction activities could increase surface erosion and increase the dissolved solid and sediment content in storm water. Storm water runoff would be controlled through implementation of an erosion and sediment control plan. ND Department of Health requires that projects disturbing one or more acres are required to have a permit to discharge storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover. Specific sediment, erosion control, and spill prevention measures would be developed during detailed design and would be included in the plans and specifications. Potential measures could include silt fences and traps, detention basins, buffer strips or other features used in various combinations.

4.5.2.4 Wastewater: Provided BMPs are used, the Proposed Action would have long-term, positive, beneficial impacts to wastewater due to the new force main. A lower probability of a wastewater discharge from a new force main would be a positive long-term impact.

4.5.2.5 Water Quality: Provided containment needs are met and best management practices are used, the Proposed Action would have insignificant impact to water quality.

4.5.2.6 Wetlands: The Proposed Action includes open excavation of the site at a distance approximately 40 ft from the center of the road. Excavation will include use of heavy equipment such as bulldozers trenching 10 ft wide and 12 ft deep. The construction site has potential for heavy equipment and excavation efforts to affect wetlands by unintentional discharge. Silt fencing in this area shall be installed around the construction zone to prevent discharge to the 3.4 acre wetland and to the adjacent drainage ditch leading to east of the lagoons. The wetland being affected by proposed replacement of the sanitary sewer is identified as follows. To the southwest of lagoon primary cell one is a 3.4 acre wetland area #LS-04 (see Figure 2.1). Very close to wetland site #LS-04, the existing transite pipe will be abandoned in place, and two new parallel lines of PVC pipe shall be installed by trenching 10 ft wide and 12 ft deep. Prior to construction, the contractor will stake the existing wetlands. Stakes are to remain in place until construction is complete. Wetland #LS-04 shall be flagged around the perimeter to notify construction personnel not to enter the site so as to avoid wetland impacts. The USACE has determined that 0.05 acre of aquatic resources are anticipated to be impacted.

Along the south edge of the lagoon primary cell one is a 0.07 acre roadside wetland ditch #LS-05 (see Figure 2.2). Excavation for aging pipe removal and replacement will take place directly in #LS-05 and will directly impact this roadside wetland. The work includes removal and replacement of existing sanitary sewer force main transite pipe with PVC pipe. Excavation affecting this small ditch-wetland shall be addressed by bringing the original ditch elevation back to grade so that no permanent fill of the ditch shall remain. Removed vegetation shall be reseeded at the projects end. Drainage will convey surface water runoff. Because the area leading to the lagoon is relatively surrounded by wetlands and a road, there is no practicable alternative to siting the replacement pipe within this small roadside wetland. Application for a Section 404 permit was made to the USACE and they determined 0.07 acre of aquatic resources will be impacted.

The section 404 permit was returned from the USACE regarding the sanitary sewer force main project as shown in Appendix D with instruction to utilize and adhere to a nationwide permit. The Corps made a

preliminary determination that the project affected wetlands are jurisdictional: 0.05 acre in #LS-04 and 0.07 acre in #LS-05. According to communication between the USACE and the Base, as documented in Appendix D, each wetland affected is considered a project, and because the affected acreage of each wetland is less than 1/10th of an acre, the Base does not have to mitigate under Nationwide Permit #12. Any jurisdictional wetland over 1/10th requires mitigation. The Base also is not required to submit a preconstruction notification either, as it does not qualify under any of the listed criteria shown on page 2 of the NWP #12 factsheet in Appendix D. The nationwide permit has several BMPs the Base is required to follow, and these are listed in the permit.

Base engineers must ensure that the eventual contractor follows the BMPs in the permit shown in Appendix D. When the project is complete, the Base is required to sign the Nationwide Permit, detail what was done to follow the BMPs in the permit, and return the permit within 30 days of project completion. If the Base should deviate from the project, additional authorization is required. At project's completion, the Base engineers will describe all the activities completed in the return package to the Corps.

4.5.2.7 Floodplains: There are no floodplains in the immediate footprint of the construction area. Provided BMPs are used, the Proposed Action would have no impact on floodplains.

4.5.3 Alternative 3 – Alternative Action

Impacts to Water Resources from the alternative action would be similar to those generated and described under the Proposed Action at 4.5.2.

4.6 BIOLOGICAL RESOURCES

4.6.1 Alternative 1 - No Action

No new impacts to wildlife, vegetation, or other biological resources would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons.

4.6.2 Alternative 2 - Proposed Action

Impacts to wildlife, vegetation, or other biological resources are as follows:

4.6.2.1.1 Vegetation: BMPs and control measures, including silt fences, covering of stockpiles, keeping construction equipment in construction areas would be implemented to ensure that impacts to biological resources and the amount of vegetation disturbed would be kept to the minimum required to complete the action. Disturbed areas should be re-established as soon as possible with appropriate wet meadow forbes and grass seed. There would be a short-term insignificant loss of vegetation from construction activities.

4.6.2.1.2 Noxious Weeds: Public law 93-629 mandates control of noxious weeds. The federal noxious weed act (7 USC 2801 et seq.) and executive order 13112 requires federal agencies to monitor and control noxious weeds on federal properties. Limit possible weed seed transport from infested areas to non-infested sites. Avoid activities in or adjacent to heavily infested areas or remove seed sources and propagules from site prior to conducting activities, or limit operations to non-seed producing seasons. Wash or otherwise remove all vegetation and soil from equipment before transporting to a new site. The base does contain invasive/noxious weeds. Equipment should be kept within the construction area to reduce transport of noxious weeds. Provided BMPs are used, the Proposed Action would have no significant impact on noxious weeds.

4.6.2.1.3 Wildlife: Construction would have insignificant impacts to wildlife, because the construction activity is short-term and construction equipment would remain in the construction area. The area is semi improved, providing habitat for mammals such as Richardson ground squirrels, rabbits, birds and invertebrates. Due to the mobility of these species and the profusion of similar landscaped areas in the general vicinity, any wildlife disturbed would be able to find similar habitat in the local area. Cumulative affects should not be considerable as the sanitary sewer area is commonly disturbed by vehicular traffic. Provided BMPs are used, the Proposed Action would have no significant impact on wildlife.

4.6.2.1.4 Threatened or Endangered Species: No federally listed threatened or endangered species are known to occur on Grand Forks AFB; therefore, no impacts on federally listed threatened or endangered species would be expected from the Proposed Action. The North Dakota Game and Fish Department has reviewed this project for wildlife concerns and believes it will not have any significant adverse effects on wildlife or wildlife habitat, including endangered species. The US Fish and Wildlife Service of North Dakota communicated that no endangered or threatened species are known to occupy the project area. However, endangered species listed by the USFWS as having the *potential* to reside in the vicinity of Grand Forks AFB include the gray wolf and whooping crane.

The Proposed Action would be expected to have no effect on gray wolves. In the rare chance that gray wolves did cross the installation, they would most likely occur within the Turtle River corridor in the northwesternmost portion of the installation. The Proposed Action is approximately 5 miles to this riparian corridor. The Proposed Action would not remove potential wolf habitat and would only cause temporary noise disturbances. The transient nature of wolves makes it difficult to foresee an impact on this species since they would be likely to avoid any area where much human activity is taking place. The Turtle River corridor is a possibility, but very unlikely to sustain a breeding population of wolves.

The Proposed Action would be not likely to adversely affect any potential migrant whooping cranes. Although unlikely due to minimal habitat on the installation, whooping cranes could potentially use the wetlands or Turtle River on the installation or its vicinity as stopover feeding habitat during spring migration (mid- to late-March and continue through mid- to late-May) and fall migration (early-September to late-October). The wetlands on the installation would not be large enough to provide roosting stopover habitat and is outside the primary migration corridor of the whooping crane. Since whooping cranes do not roost or nest on the installation and would only occur incidentally during migration periods for feeding purposes, the Proposed Action would be not likely to adversely affect whooping cranes.

Habitats on the installation do support use by state-listed threatened species (as defined by the North Dakota Natural Heritage Program) and species of conservation priority. The most recent compilation of all bird data collected on GFAFB identifies 18 Birds of Conservation Concern (USFWS 2002), 8 birds on the North Dakota Threatened or Endangered Species, ND Natural Heritage Inventory (Ranks S1-S3), 32 birds on the ND Species of Concern, ND Natural Heritage Inventory, 35 birds on the Partners in Flight Bird Conservation Plan for the Northern Tallgrass Prairie (Physiographic Area 40), 1998 and 29 birds on the ND Special Programs, Comprehensive Wildlife Conservation Strategy, 100 Species of Conservation Priority, 2004. Most of these are migratory bird species that use a variety of habitats on Grand Forks AFB, such as grasslands and wetland areas. There is suitable habitat adjacent to the work area for many of the birds of conservation concern as listed above and other animals for the construction of a new sanitary sewer. There is a multitude of wetlands surrounding the lagoons to the north east of this project, as well as the nearby Kellys Slough National Wildlife Refuge starting a mile east of the project. The wetlands affected by this project are small and insignificant in comparison. For wetlands purposes, these two projects affect .05 and .07 acres respectively, while the Base contains 301 acres of wetland and

Kellys Slough NWR has 1,867 acres. Breeding birds that are species of conservation concern or state-listed species have been documented at the installation. Short-term and long-term, negligible to minor, adverse effects on state-protected and state-sensitive species would be expected from the Proposed Action as a result of noise from construction and removal activities, and temporary loss or degradation of habitat.

The MBTA and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, require Federal agencies to minimize or avoid impacts on migratory birds listed in 50 CFR 10.13. If design and implementation of a Federal action cannot avoid measurable negative impacts on migratory birds, EO 13186 requires the responsible agency to consult with the USFWS and obtain a Migratory Bird Depredation Permit. Grand Forks AFB currently maintains a Migratory Bird Depredation Permit from the USFWS for airfield grounds, issued for the following species: cliff swallow, barn swallow (*Hirundo rustica*), mallard (*Anas platyrhynchos*), blue-winged teal (*Anas discors*), redhead, ruddy duck (*Oxyura jamaicensis*), northern shoveler (*Anas clypeata*), Canada goose (*Branta canadensis*), Swainson's hawk, red-tailed hawk (*Buteo jamaicensis*), ring-billed gull (*Larus delawarensis*), horned lark (*Eremophila alpestris*), mourning dove, cliff swallow nests, and barn swallow nests (GFAFB 2005). Construction and removal associated with the Proposed Action would be conducted in a manner to avoid adverse impacts on migratory birds to the extent practicable.

The Proposed Action should have insignificant impact on these sensitive species. A survey of the project area should be performed just prior to commencement or resumption of activity to ensure that no Federal or State-listed species are in the project area. The project area is semi-improved and construction management practices should be conducted to reduce any adverse impacts. The activity footprint should remain within the proposed site. All alternatives would be accomplished in compliance with the INRMP. Insignificant impacts associated with the wildlife, vegetation, or other biological resources during construction and removal activities and operation of equipment would be insignificant, temporary (100 days) and cease at the completion of these sanitary sewer replacement activities.

4.6.3 Alternative 3 – Alternative Action

Insignificant impacts to Biological Resources from replace sanitary sewer from Building 801 to the lagoons Alternative Action would be similar to those generated and described under the Proposed Action at 4.6.2.

4.7 SOCIOECONOMIC RESOURCES

4.7.1 Alternative 1 - No Action

No new impacts to socioeconomic resources would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons.

4.7.2 Alternative 2 - Proposed Action

Socioeconomic resources would be impacted if implementation of the Proposed Action resulted in a change to the population, employment, or income potential of Grand Forks AFB and the Region of Interest (ROI). Implementing the Proposed Action would not result in negative impacts to the socioeconomic conditions of the ROI. The Proposed Action would not involve relocation of personnel; therefore, no change to the population or permanent workforce would be expected. The economic benefits would be local and short-term, such as construction jobs, purchase of construction materials and services and secondary retail sales.

The Proposed Action would not create permanent employment positions or reduce the current

employment opportunities at Grand Forks AFB and the ROI; therefore, there would be no long-term changes to employment and income potential. The unemployment rate in the ROI is low and would not be impacted by the small increase in short-term employment opportunities provided by the Proposed Action. The removal of existing pipe and construction of new force main on Grand Forks AFB would cost approximately \$1.1 million. There would be a small, positive impact to the total personal income in the ROI. Insignificant impacts associated with the socioeconomic resources during construction activities and operation of equipment would be insignificant, temporary and cease at the completion of these sanitary sewer replacement activities.

4.7.3 Alternative 3 – Alternative Action

Insignificant impacts to Socioeconomic Resources from the alternative action would be similar to those generated and described under the Proposed Action at 4.7.2.

4.8 CULTURAL RESOURCES

4.8.1 Alternative 1 - No Action

No new impacts to cultural resources would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons.

4.8.2 Alternative 2 - Proposed Action

The Proposed Action to construct a new sanitary sewer has little potential to impact underground archaeological resources. The location of the new sanitary sewer site is in a previously disturbed area for archaeological resources. In the unlikely event any such artifacts are discovered during the construction activities, the contractor would be instructed to halt construction and immediately notify the Grand Forks AFB Cultural Resource Manager who would notify the State Historic Preservation Officer (SHPO).

Fill from the existing locations will be reused in the site. If additional fill is needed, off-site clean fill shall be used to backfill the construction sites. Borrow is to be derived from an archeological-approved source of the State Historical Society of North Dakota. One approved source is aggregate material (gravel, sand, silt, clay and boulder rip rap) from existing pits being used by federal agency projects (e.g., NDDOT/FHWA). Other alternative borrow sources that may be used are to be identified during consultation and review by SHPO. Insignificant impacts associated with the cultural resources during construction activities and operation of equipment would be insignificant, temporary and cease at the completion of construction activities.

4.8.3 Alternative 3 – Alternative Action

Insignificant impacts to Cultural Resources from the alternative action would be similar to those generated and described under the Proposed Action at 4.8.2.

4.9 LAND USE

4.9.1 Alternative 1 - No Action

No new impacts to land use would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons.

4.9.2 Alternative 2 - Proposed Action

The Proposed Action would not change the land use, since the new sanitary sewer is in the area designated for Industrial operations. The USAF land use planning process is designed to ensure efficient use of available resources and that the functional relationships of land use arrangements meet the goals and objectives of the base. Limited growth is anticipated at Grand Forks AFB with the mission change to the Remotely Piloted Aircraft (RPA). No population growth fluctuations are anticipated in the foreseeable future. The Proposed Action has no adverse impact to land use.

4.9.3 Alternative 3 – Alternative Action

Insignificant impacts to Land Use from the alternative action would be similar to those generated and described under the Proposed Action at 4.9.2.

4.10 TRANSPORTATION SYSTEMS

4.10.1 Alternative 1 - No Action

No new impacts to transportation systems would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons.

4.10.2 Alternative 2 - Proposed Action

Implementing the Proposed Action would not result in long-term impacts to the transportation networks at Grand Forks AFB. Short-term impacts from implementing the Proposed Action could include increased traffic movement for the duration of construction activities. The movement of equipment and vehicles for construction activities would result in short-term impacts to traffic and circulation during peak hours at Grand Forks AFB. Many trips would occur outside of peak hours as well. Short-term congestion resulting from construction vehicle traffic would be insignificant, temporary and cease at the completion of these replacement activities.

4.10.3 Alternative 3 – Alternative Action

Insignificant impacts to Transportation Systems from the alternative action would be similar to those generated and described under the Proposed Action at 4.10.2.

4.11 AIRSPACE/AIRFIELD OPERATIONS

4.11.1 Alternative 1 - No Action

No new impacts to airspace and airfield operations would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons.

4.11.2 Alternative 2 - Proposed Action

The Proposed Action would have insignificant impact on aircraft safety and airspace compatibility. The airfield is 1.5 miles from the nearest portion of the Proposed Action.

4.11.3 Alternative 3 – Alternative Action

Insignificant impacts to Airspace and Airfield Operations from the alternative action would be similar to those generated and described under the Proposed Action at 4.11.2.

4.12 SAFETY AND OCCUPATIONAL HEALTH

4.12.1 Alternative 1 - No Action

Negative impacts to safety and occupational health would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons. Force main breaks would likely occur at a higher frequency and risks from potential biological spills of human waste sewage would increase.

4.12.2 Alternative 2 - Proposed Action

Participants in the construction project are required to wear appropriate personnel protective equipment (PPE) for protection from exposure to bacteria, parasites and ACM. Any excavation in this area needs to be reviewed by the Base Bioenvironmental Engineer for worker protection. Removal of asbestos pipe must be performed by certified officials following state and federal solid and hazardous waste rules. Implementation of the Proposed Action would result in long-term benefits to personnel health and safety by improving the living and working conditions involving the new sanitary sewer force main. Provided BMPs are used, the Proposed Action would have positive impact on safety and occupational health.

4.12.3 Alternative 3 – Alternative Action

Insignificant impacts to Safety and Occupational Health from the alternative action would be similar to those generated and described under the Proposed Action at 4.12.2. With additional quantities of ACM removed and disposed, the potential for safety and health issues would increase.

4.13 ENVIRONMENTAL MANAGEMENT

4.13.1 Alternative 1 - No Action

No new impacts to environmental management would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons.

4.13.2 Alternative 2 - Proposed Action

Impacts to environmental management are as follows:

IRP: All sites are 1 to 2 miles west of Proposed Action. Provided BMPs are followed, the Proposed Action would not impact IRP Sites.

Geology: The Proposed Action would not impact geological resources. Soils present in the proposed area include the Gilby loam series. The elevation at this site is 893 feet.

Pesticides: No pesticides would be used during the construction of a new sanitary sewer force main.

Insignificant impacts associated with environmental management during construction and removal activities and operation of equipment would be insignificant, temporary and cease at the completion of these sanitary sewer replacement activities.

4.13.3 Alternative 3 – Alternative Action

Insignificant impacts to Environmental Management from the alternative action would be similar to those generated and described under the Proposed Action at 4.13.2.

4.14 ENVIRONMENTAL JUSTICE

4.14.1 Alternative 1 - No Action

Construct Sanitary sewer - No new impacts to environmental justice would occur from the No Action Alternative to replace sanitary sewer from Building 801 to the lagoons.

4.14.2 Alternative 2 - Proposed Action

EO 12898 requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies and activities on minority and low-income populations. Implementing the Proposed Action would not result in environmental justice impacts since there are no low-income or minority populations or children within or immediately adjacent to the project area.

4.14.3 Alternative 3 – Alternative Action

Insignificant impacts to Environmental Justice from the alternative action would be similar to those generated and described under the Proposed Action at 4.14.2.

The following Table 4.14-1, Summary of Environmental Impacts, offers a summary of the environmental consequences. Short-term (ST) impacts are those that occur during the timeframe of the construction project (approximately 100 days) and long-term (LT) impacts occur subsequent to the completion of construction.

Table 4.14-1: Summary of Environmental Impacts – Actions			
	No Action No Replacement Sanitary sewer	Proposed Action Replace Sanitary Sewer; Landfill 877 LF transit; easement	Alternative Action Replace sanitary sewer; landfill 3645 LF transit; no easement
Legend: ST = short-term (100 days); LT = long-term			
Air Quality	None	None	None
Noise	None	ST	ST
Wastes, Hazardous Materials and Stored Fuels	Potential contamination	ST	ST
Water Resources			
Ground Water	Potential contamination	None	None
Surface Water	Potential contamination	ST	ST
Wastewater	Failure	Beneficial impact	Beneficial impact
Water Quality	None	None	None
Wetlands	Potential contamination	ST Impact	ST Impact
Biological Resources			
Vegetation	None	ST	ST
Noxious Weeds	None	None	None
Wildlife	None	None	None
Threatened and Endangered Species	None	None	None
Socioeconomic Resources	Additional cost for repairs	Beneficial for local contractors	Beneficial for local contractors
Cultural Resources	None	None	None
Land Use	None	None	None
Transportation Systems	None	ST	ST
Aircraft Safety	None	None	None
Airspace Compatibility	None	None	None
Safety and Occupational Health	Potential sewage biological contamination	Beneficial	Beneficial
Environmental Management			
Installation Restoration Program	None	None	None
Geological Resources	None	None	None
Pesticide Management	None	None	None
Environmental Justice	None	None	None

4.15 INDIRECT AND CUMULATIVE IMPACTS

The short-term increases in air emissions and noise during construction and the impacts predicted for other resource areas, would not be significant when considered cumulatively with other ongoing and planned activities at Grand Forks AFB and nearby off-base areas. The cumulative impact of the Proposed Action or Alternatives with other ongoing activities in the area would produce an increase in solid waste generation; however, the increase would be limited to the timeframe of each project.

The potential impacts to issues and resource areas of interest in this EA are short-term and insignificant. No resources were found to have a long-term effect resulting from implementation of the Proposed Action, except temporary loss of 0.05 and 0.07 acre of wetland. The incremental contribution of impacts of the Proposed Actions, when considered in combination with other past, present and reasonably foreseeable future actions, would be negligible. The Proposed Action would be concurrent with capital improvement projects specified in the General Plan that would be assessed in separate NEPA documents as necessary. Overall, the analysis for this EA indicates that the Proposed Action for this sanitary sewer project would not result in, or contribute to, significant negative cumulative impacts to the resources in the region. The new sanitary sewer force main would provide a huge benefit to the wastewater program, in providing less repairs to existing pipe and less exposure to bacteria and parasites to the repairmen.

Planned improvements to infrastructure and facilities are included in the 5-year, 10-year and 20-year plans in accordance with the base comprehensive plan for Grand Forks AFB. Potential impacts to resources from implementation of projects in these plans, including removal and construction activities, would be similar to the Proposed Action in this EA and would revert to baseline conditions after completion of the individual projects. The USAF land use planning process is designed to ensure efficient use of available resources and that the functional relationships of land use arrangements meet the goals and objectives of the base. Limited growth is anticipated at Grand Forks AFB in the short-term. A significant mission change from KC135 refueling tankers to the Remotely Piloted Aircraft (RPA) with military population decline is anticipated in the foreseeable future of Grand Forks AFB. However, other associations with Air National Guard, Department of Homeland Security and other organizations involved in the RPA mission may prove to be healthy growth in the long-term future of Grand Forks AFB. The Air Force would construct and renovate appropriate facilities on GFAFB to launch, recover, maintain and support the RPA. The RPA beddown is being evaluated by an Environmental Impact Statement currently in progress.

4.16 UNAVOIDABLE ADVERSE IMPACTS

Unavoidable adverse impacts are likely to occur if the No Action Alternative is implemented. If sanitary sewer pipe is not replaced, unavoidable adverse impacts on resources with the economic burden of maintaining aging pipe would increase from current levels. In addition, unavoidable adverse impacts would increase for safety and occupational health as these pipes continue to age and degrade, presenting safety issues for Grand Forks AFB personnel who perform repair on them.

The Proposed Action and Alternative 3 would involve the use of construction related vehicles and their short-term impacts on noise, air quality and traffic are unavoidable. These impacts would be short-term and insignificant in comparison to the long-term benefits of implementing the Proposed Action or Alternative 3.

In compliance with Executive Order 11990, *Protection of Wetlands*, May 24, 1977, the Air Force will seek to preserve the natural values of wetlands while carrying out its mission on both AF lands and non-AF lands. To the maximum extent practicable, the AF will avoid actions which would either destroy or adversely modify wetlands. Executive Order 11990 requires federal agencies to avoid to the extent practicable, adverse impacts associated with the destruction or modification of wetlands. The Order directs federal agencies to avoid new construction in wetlands unless there is no reasonable alternative and states that where wetlands cannot be avoided, the Proposed Action must include all practicable measures to minimize harm to wetlands. Because the area leading to the lagoon is relatively surrounded by wetlands on one side and a road on the other side, there is no practicable alternative to siting the replacement pipe within these two small roadside wetlands. Since wetlands would be impacted by this

project, a FONPA must be prepared and submitted for review and approval by the HQ AMC Director, Installation and Mission Support prior to implementing the impacting activity.

4.16.1 Wetland Avoidance

Wetlands account for 301 acres, or 5.8 percent, of the total land area that comprises Grand Forks AFB. Wetlands are predominantly located in undeveloped areas of the Base. They are generally found on the north and northeast side of the runway, southwest corner of the base, and southeast corner of the base. It is not possible to avoid wetland impacts completely and sufficiently address the purpose and need of the Proposed Action. There are wetlands in the immediate footprint of the construction area of the new sanitary sewer site. The 2009 wetland delineation revealed the presence of wetlands at the site of the proposed action. The wetland being affected by proposed activities is identified as #LS-04 and LS-05 in the base GIS. It is 0.05 acre and 0.07 acre in size respectively and described as palustrine emergent wetland located in a shallow basin surrounded by roadway on the south and lagoon on the north. Site restoration will bring the wetland habitat back to the ditch. Because the area leading to the lagoon is relatively surrounded by wetlands and a road, there is no practicable alternative to siting the replacement pipe within this small roadside wetland.

4.16.2 Minimize Wetland Impacts

The Base submitted a Section 404 application for a permit under the Clean Water Act (33USC 401, Section 10; 1413, Section 404, to the United States Army Corps of Engineers. The Corps made a preliminary determination that the project affected two wetlands that are jurisdictional and instructed the Base to utilize and adhere to nationwide permit #12. The location of the proposed sanitary sewer, as proposed in this EA, would have affect on two pieces estimated at 0.05 acre and 0.07 acre of wetlands identified in the sanitary sewer wetland delineation summary report and the USACE Preliminary Jurisdictional Determination Form enclosed in Appendix D. The impacts would be predominantly from replacement of new sanitary sewer force main in the ditch near lagoon cell #1. Because this Proposed Action is a linear project crossing a water body two times at separate and distant locations, each crossing is considered a single and complete project. Each wetland affected is considered a project, and because the affected acreage of each wetland is less than 1/10th of an acre the Base does not have to mitigate under Nationwide Permit #12. The Base is not required to submit a preconstruction notification (PCN) because the Proposed Action did not meet the listed criteria on page 2 of the NWP #12 fact sheet enclosed in Appendix D. The Base must comply with the requirements of the Nation Wide Permit #12 and restore the ditch wetland to original elevation and vegetation. No wetland compensation is required by USACE because each project impact is less than 1/10th of an acre.

4.16.3 Best Management Practices for Wetlands

If impacts cannot be completely avoided, reduction of effects is evaluated based upon type and extent of the impact on the wetland or waters of the United States. Indirect effects could occur to wetlands or other waters of the United States that are in proximity to proposed project activities. Implementation of the following management practices where appropriate would minimize potential for indirect impacts to wetlands and other water of the United States that are adjacent to proposed activities:

Construction Controls

- The wetlands and other waters of the United States should be clearly flagged prior to commencement of construction activities. This would prevent construction workers from entering these wetlands and potentially placing fill within the wetlands or trampling wetland vegetation.

- Construction activities should be phased so that smaller areas of land are disturbed at one period of time. This would result in less soil exposed at one time, and would reduce the potential for erosion and deposition of sediment into wetlands or other waters of the United States.
- Water quality control features such as sedimentation basins and detention or retention ponds should be installed as applicable prior to initiation of construction activities. Temporary basins and silt traps would be constructed as necessary to contain sediment and runoff on the construction area. Hay bales and silt fences should be used to minimize transport of sediments off of the project area. All fuels and other potentially hazardous materials should be contained and stored appropriately. In the event of a spill, procedures outlined in the installation's Spill Prevention, Control, and Countermeasure Plan (SPCC) would be followed to quickly contain and clean up a spill.
- An erosion and sedimentation control plan should be developed prior to initiation of construction activities and adhered to during development.
- Erosion control structures should be installed down gradient of the construction site in sloped areas adjacent to wetlands and other water bodies. The structures should be regularly maintained and removed once vegetation has been reestablished.
- A construction grading plan should be developed to show existing and proposed topography. Grading should be conducted in a manner that would direct storm water runoff generated from construction activities away from nearby wetlands or waters of the United States, but existing drainage patterns and hydrology should be maintained. Best management practices such as installation of silt fencing along wetland buffers would aid in prevention of siltation if natural site hydrology directs storm water runoff to the wetlands.
- Access paths should be located along high ground, or docks or boardwalks should be used when necessary to cross a wetland rather than filling the wetland. Storm water runoff originating from the construction site should be diverted and sedimentation controls implemented to avoid discharging into the wetland.
- When wetland crossings cannot be avoided, the use of heavy machinery in wetlands should be minimized by installing construction barriers at the edge of the proposed area of disturbance.
- Construction activities should be restricted to drier periods during the year (summer and fall).
- Construction debris should be disposed of at a suitable non-wetland site.

Natural Resources Controls

- A Storm Water Pollution Prevention Plan (SWPPP) should be developed and implemented to prevent surface water degradation of wetlands within close proximity of project sites.
- Storm water runoff originating from impervious surfaces should be routed through storm water treatment facilities prior to discharging into surface waters. Existing drainage ways should be preserved. Water should not be diverted away from or towards wetlands and other waters of the United States. This aids in maintaining the existing hydrology.
- A buffer surrounding wetlands and waters of the United States should be established on wetlands identified at Grand Forks AFB. Buffers reduce adverse effects of development, most importantly in relationship to slope and vegetative cover. Maintaining dense shrubs or forested vegetation in areas with steep slopes provides the greatest protection from polluted runoff. In addition, buffer effectiveness increases with buffer width. As buffer width increases, the effectiveness of removing sediments, nutrients, bacteria, and other pollutants from surface water runoff increases.
- Removal of vegetation should be minimized. In areas where excavation is not proposed but vegetation removal is necessary, vegetation should be cut at the ground level, leaving roots intact. Disturbed areas should be seeded, sodded, or planted with indigenous material as soon as possible after construction activities are completed, as appropriate.

- The spread of noxious weeds can be controlled by avoiding activities in or adjacent to heavily infested areas, removing seed sources and propagules from the site prior to conducting activities, or limiting operations to non seed-producing seasons. Following activities that expose the soil, mitigation can be achieved by covering the area with weed-seed free mulch or seeding the area with native species including wet meadow forbes and grass seed. Soil should be covered to reduce the germination of weed seeds, maintain soil moisture, and minimize erosion.
- Areas where wetland soils have been disturbed should be monitored for nuisance or invasive plant species for 5 years following construction. Two such species are purple loosestrife (*Lythrum salicaria*) and common reed (*Phragmites australis*).

4.17 RELATIONSHIP BETWEEN USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Balancing the local short-term uses of the human environment with the maintenance and enhancement of long-term productivity is an important consideration in planning a project. For the purposes of this project, short-term uses of the environment include direct construction-related disturbances occurring over the projected 100 day timeframe (or slightly longer) for the project. Long-term uses of the human environment include those impacts occurring after construction activities area completed. If the project was not constructed, existing uses would likely continue and the potential for sewer breaks would increase.

The Proposed Action and Alternative 3 would involve the use of previously developed areas. An area of cropland 7 feet wide by 1780 feet long, 0.29 acre, will need a permanent easement for the new pipe, allowing Air Force personnel access to work on the pipe when necessary. The farmer will still be able to use the land to plant crop, with the understanding that the Base would have access to it should maintenance work need to be done on the force mains in the future. The farmer will be paid by the government for the permanent easement, as negotiated by the USACE.

Wetland in the project area will be impacted. Short-term effects would be those associated with the construction activities to improve the wastewater utilities at Grand Forks AFB. Implementation of the Proposed Action would not sacrifice long-term productivity of the environment for short-term uses. The long-term enhancement of productivity would be those effects associated with operation and maintenance of the utility after implementation of the Proposed Action.

4.18 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Under the Proposed Actions, fuels, manpower, economic resources and other recovery materials related to the construction of a new sanitary sewer would be irreversibly lost. An irreversible effect would result from the use or destruction of resources (e.g., energy) that cannot be replaced within a reasonable time.

Use of fill material and other construction materials and loss of vegetation for implementation of the Proposed Action would represent an irreversible commitment of resources since the new pipes would be expected to remain useful for many years. Use of fuel for operation of construction equipment represents another irreversible commitment of resources in the Proposed Actions. The amount of fuel used for activities during the construction period would represent a negligible amount compared to the amount of fuel used daily for operation of Grand Forks AFB. Other resource commitments would be neither irreversible nor irretrievable. A FONPA must be prepared and submitted for review and approval by the Director, Installation and Mission Support prior to implementing the impacting activity because of the impact to wetlands.

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7.0 REFERENCES

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REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
RCS: 2010-036

INSTRUCTIONS: Section I to be completed by Proponent. Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).

SECTION I - PROPONENT INFORMATION

1. TO (Environmental Planning Function)	2. FROM (Proponent Organization and functional address symbol)	2a. TELEPHONE NO.
HQ AMC/A7P - Community Planning 507 Symington Drive, P40/W206 Scott AFB IL 62225-0121	319 CES/CEAO 525 Tuskegee Airmen Blvd Grand Forks AFB ND 58205-6434	Ms Diane Strom (701) 747-6394 DSN 362-6394

3. TITLE OF PROPOSED ACTION


Replace sanitary sewer pipe in a wetland ditch at Grand Forks AFB ND (JFSD200803)

4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date)

(See attached)

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action)

(See attached)

6. PROPONENT APPROVAL (Name and Grade)	6a. SIGNATURE	6b. DATE
MARY C. GILTNER, YF-03 Base Civil Engineer		29 Apr 10

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY (Check appropriate box and describe potential environmental effects including cumulative effects) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown effect)

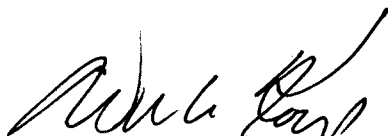
	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)		X		
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)		X		
9. WATER RESOURCES (Quality, quantity, source, etc.)		x		
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity distance, bird/wildlife aircraft hazard, etc.)		X		
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)		X		
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)			x	
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)		X		
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)		x		
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)		X		
16. OTHER (Potential impacts not addressed above.)		X		

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17.	X	PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # A2.3.12. OR (See attached)
		PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED

18. REMARKS

Installing, operating, modifying, and routinely repairing and replacing utility and communications system, data processing cable, and similar electronic equipment that use existing rights of way, easements, distribution systems, or facilities. This action is not "regionally significant" and does not require a conformity determination in accordance with 40 CFR 93.153(1). The total emission of criteria pollutants from the proposed action are below the de minimus thresholds and less than 10 percent of the Air Quality Region's planning inventory.

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade)	19 a. SIGNATURE	19 b. DATE
WAYNE A. KOOP, R.E.M., YC-02 Asset Management Flight Chief, Grand Forks AFB ND		APR 29 2010

SECTION I – PROPONENT INFORMATION

4.0 PURPOSE AND NEED FOR ACTION

Grand Forks AFB has identified a straddle project #JFSD200803 to replace the sanitary sewer force main from the main gate lift station (801) to the lagoons. As part of that initiative, Grand Forks AFB proposes to replace two lines of 100 weight transite pipe (7,500 LF) with new C-900 pipe from Building 801 to the lagoons, directly east of main gate. This route will follow the existing force main and replace new pipe along the north side of the existing fifty year old pipe in the ground. It will provide air vents and relief valves where required. The contractor will backfill and compact the area and provide site restoration. The transite piping will be handled and disposed of in accordance to all State, Federal, and Local regulations.

Emergency repairs were performed three times in the last year. The existing transite pipe forced main is deteriorating and is beginning to develop leaks. If no action is taken, the transite piping will continue to fail and emergency repairs will need to be made. Failure of the piping leaves the base vulnerable to a notice of violation. Map and photos of the area are included below.

4.1 Purpose of the Action

This action is proposed to simplify maintenance requirements and reduce infrastructure repair costs of the sewer main.

4.2 Need for the Action

The sanitary sewer pipes have deteriorated with age, presenting unhealthy spills of sanitary sewage, as well as unsightly appearances of contaminated soil, and have reached the end of their useful life. The pipe is over 50 years old, is continuously deteriorating through age, and suffers from durability cracking. It does not meet current Air Force standards. Without repair or replacement, these pipes would continue to deteriorate until unusable. The proposed action is needed for replacing the pipe with a more durable and cost effective material.

5.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

5.1 Description of the Proposed Action

Grand Forks AFB proposes to replace two lines of 100 weight transite pipe (7,500 LF) with new C-900 pipe from Building 801 to the lagoons on project JFSD200803. The existing force mains run along the north side of a gravel road (19th Ave NE) from 25th Street NE (at the main gate) to the sewage treatment lagoons. The project consists of placing dual 10" C-900 PVC force mains in a single trench with air relief valves. The new alignment is located to the north of the existing 8" and 10" transite force mains. The alignment will include two directional borings that cross 25th Street NE. The design will require bypass pumping of the existing 8" line and existing 10" line during construction. Construction phasing can shorten the bypass pumping time, however it is the goal of this project to maintain service in two lines at all times. High voltage electrical relocation will need to be completed near the lift station. The contractor will backfill and compact the area and provide site restoration, to include minor fencing, landscaping, seeding and sodding. There are portions of the existing transite lines that will need to be removed and disposed of to complete the construction. These sections of cement concrete include 827' (x2) of pipe adjacent to the lagoons and 50' (x2) of pipe adjacent to Building 801. The transite piping will be handled and disposed of in accordance to all State, Federal, and Local regulations. The contractor must haul off the concrete pipe debris to an approved landfill for asbestos-containing material.

Located on the west, southwest edge of the lagoon primary cell 1 is a wetland, identified in the map below as #LS-04, and by the Wetland Boundary of Data Points 3, 2 and 1. It is approximately 3.4 acres of palustrine emergent wetlands. See map and photos below. Design engineers evaluated the surrounding area for a proposed location of the pipe, which resulted in a wetlands delineation. The delineation was performed because Grand Forks AFB plans to construct and replace the sewer pipe alongside an existing wetland, plus through a ditch alongside the lagoon primary cell. The delineation document details the wetlands located north of gravel road 19th Avenue NE, one and one half mile east of the Grand Forks AFB main gate. Points 3 and 1 indicated hydric soils (Bearden silty clay loam, saline) are present at the sample site, observed soil is consistent with hydric criteria, but vegetation and

hydrology do not meet hydric criteria. The sampling site is likely the transition from wetland to the north to road embankment to the south. Point 2 indicated the presence of cattail was indicative of sample site being in transition zone from wetland to upland. Aerial photo reveals visible saturation nearby (north), but not at sample site. When digging at this point, the soil must be stockpiled to the east or west to avoid the saturation to the north. It does not appear that the existing wetlands encroach onto the alignments of the existing 8" and 10" force main lines but the alignments of the proposed replacement force mains may be near. This will be confirmed with an ongoing survey and pot-hole operations. Wetland #LS-02 is a 47 acre alkaline mud flat exhibiting sparse vegetation draining into an emergent marsh wetland located in drainage ditch excavated in upland area. It is far enough from the road that there should be no impact from the pipe installation.

Prior to construction, the contractor will stake the existing wetlands. Stakes are to remain in place until construction is complete. No crossing into the wetland is permitted during construction. Workers must be diligent to remove the soil carefully to avoid as little impact to the wetland as possible.

Another wetland, called a roadside wetland in the delineation, and numbered #LS-05, would be affected by the proposed action as a result of removing earth to replace the sanitary sewer pipes along the narrow ditch along the south side of the lagoons. Replacement of the sewer main along the south edge of the primary cell of the lagoons would affect approximately 0.07 acre of palustrine emergent wetlands. Vegetation would be disturbed during pipe replacement, but long term impacts would be equivalent as the area naturally reverts to wetland vegetation.

5.2 Anticipated Environmental Issues

As required by Executive Order 11990, Protection of Wetlands, the Air Force has determined that the proposed action occurs within the wetlands at Grand Forks AFB. Six percent of Grand Forks AFB is in wetlands. The majority of wetlands at GFAFB are associated with prairie potholes, low-lying areas and ditches. Air Force Environmental Impact Analysis Process (EIAP) implements EO 11990 *that* requires each federal agency to protect the natural values of wetlands and avoid actions which would either destroy or modify their existence or function. While wetland resources may be subject to environmental impact, this EIAP includes a Finding of No Practicable Alternative (FONPA) to the proposed action. Relocation of the sanitary sewer pipe to another site on Grand Forks AFB is not practicable. Under EIAP, a FONPA must be submitted to the MAJCOM EPF.

The Proposed Action would not result in significant adverse effects on the land or the surrounding area. However, BMPs and other minimization measures would be implemented to eliminate or reduce the impacts of adverse effects. General BMPs that may be included as parts of the Proposed Action are summarized as follows:

- Clearing and grubbing would be timed with construction to minimize the exposure of cleared surfaces. Such activities would not be conducted during periods of wet weather. Construction activities would be staged to allow for the stabilization of disturbed soils.
- Construction activities should be phased so that smaller areas of land are disturbed at one period of time. This would result in less soil exposed at one time, and would reduce the potential for erosion and deposition of sediment into wetlands or other waters of the United States.
- Fugitive dust-control techniques such as soil watering and soil stockpiling would be used to minimize adverse effects. All such techniques would conform to applicable regulations.
- Soil erosion-control measures, such as soil erosion-control mats, silt fences, straw bales, diversion ditches, riprap channels, water bars, water spreaders, sediment basins and hardened stream crossings, would be used as appropriate. Water quality control features such as sedimentation basins and detention or retention ponds should be installed as applicable prior to initiation of construction activities. Temporary basins and silt traps would be constructed as necessary to contain sediment and runoff on the construction area. Hay bales and silt fences should be used to minimize transport of sediments off of the project area.
- An erosion and sedimentation control plan should be developed prior to initiation of construction activities and adhered to during development.
- Erosion control structures should be installed down gradient of the construction site in sloped areas adjacent to wetlands and other water bodies. The structures should be regularly maintained and removed once vegetation has been reestablished.
- A construction grading plan should be developed to show existing and proposed topography. Grading should be conducted in a manner that would direct storm water runoff generated from construction activities away

from nearby wetlands or waters of the United States, but existing drainage patterns and hydrology should be maintained. Best management practices such as installation of silt fencing along wetland buffers would aid in prevention of siltation if natural site hydrology directs storm water runoff to the wetlands.

- Disturbance of environmental resources and topography would be minimized by integrating existing vegetation, trees, and topography into site design.
- Where feasible, areas of impervious surface would be minimized through shared parking, decked or structured parking, increased building height, or other measures as appropriate. Access paths should be located along high ground, or docks or boardwalks should be used when necessary to cross a wetland rather than filling the wetland. Storm water runoff originating from the construction site should be diverted and sedimentation controls implemented to avoid discharging into the wetland.
- When wetland crossings cannot be avoided, the use of heavy machinery in wetlands should be minimized by installing construction barriers at the edge of the proposed area of disturbance.
- Provisions would be taken to prevent pollutants from reaching the soil, groundwater, or surface water. During project activities, contractors would be required to perform daily inspections of equipment, maintain appropriate spill-containment materials on site, and store all fuels and other materials in appropriate containers. Equipment maintenance activities would not be conducted on the construction site.
- All fuels and other potentially hazardous materials should be contained and stored appropriately. In the event of a spill, procedures outlined in the installation's Spill Prevention, Control, and Countermeasure Plan (SPCC) would be followed to quickly contain and clean up a spill.
- Physical barriers and "no trespassing" signs would be placed around the demolition and construction sites to deter children and unauthorized personnel. All construction vehicles and equipment would be locked or otherwise secured when not in use.
- The wetlands and other waters of the United States should be clearly flagged prior to commencement of construction activities. This would prevent construction workers from entering these wetlands and potentially placing fill within the wetlands or trampling wetland vegetation.
- Construction equipment would be used only as necessary during the daylight hours and would be maintained to the manufacturer's specifications to minimize noise impacts.
- Construction debris should be disposed of at a suitable non-wetland site.
- A Storm Water Pollution Prevention Plan (SWPPP) should be developed and implemented to prevent surface water degradation of wetlands within close proximity of project sites.
- Storm water runoff originating from impervious surfaces should be routed through storm water treatment facilities prior to discharging into surface waters. Existing drainage ways should be preserved. Water should not be diverted away from or towards wetlands and other waters of the United States. This aids in maintaining the existing hydrology.
- A buffer surrounding wetlands and waters of the United States should be established on wetlands identified at Grand Forks AFB. Buffers reduce adverse effects of development, most importantly in relationship to slope and vegetative cover. Maintaining dense shrubs or forested vegetation in areas with steep slopes provides the greatest protection from polluted runoff. In addition, buffer effectiveness increases with buffer width. As buffer width increases, the effectiveness of removing sediments, nutrients, bacteria, and other pollutants from surface water runoff increases.
- Removal of vegetation should be minimized. In areas where excavation is not proposed but vegetation removal is necessary, vegetation should be cut at the ground level, leaving roots intact.
- Disturbed areas should be seeded, sodded, or planted with indigenous material as soon as possible after construction activities are completed, as appropriate.
- The spread of noxious weeds can be controlled by avoiding activities in or adjacent to heavily infested areas, removing seed sources and propagules from the site prior to conducting activities, or limiting operations to nonseed-producing seasons. Following activities that expose the soil, mitigation can be achieved by covering the area with weed-seed free mulch or seeding the area with native species. Soil should be covered to reduce the germination of weed seeds, maintain soil moisture, and minimize erosion.
- Areas where wetland soils have been disturbed should be monitored for nuisance or invasive plant species for 5 years following construction. Two such species are purple loosestrife (*Lythrum salicaria*) and common reed (*Phragmites australis*).

Short- and long-term, minor, adverse effects on soils would be expected from implementation of the proposed Action. The primary short-term effects would occur during construction activities when vegetation is cleared and

the earth is bare. Additional ground-disturbing activities could occur in association with construction activities. However, soils have been previously disturbed during initial construction of pipe, so effects would be expected to be minor. Best management practices (BMPs) would be implemented during construction activities, and approved erosion and sediment control plan (ESCP) and stormwater pollution prevention plan (SWPPP) would be followed to reduce effects of increased impervious surfaces. Berming along nearby water bodies would decrease the amount of potential sedimentation in adjacent water bodies. Section 438 of the Energy Independence and Security Act (EISA) would be adhered to so that pre- and post-development hydrology would be equal.

Following activities which expose the soil, mitigation can be achieved by covering the area with weed-seed free mulch or seeding the area with native species or other base approved seed mixture. Covering the soil reduces the germination of weed seeds, maintains soil moisture, and minimizes erosion.

In the event of a spill or leak of fuel or other construction related products, all fuels and other potentially hazardous materials would be contained and stored appropriately and spill procedures outlined in Grand Forks AFB's SPCC Plan would be followed to contain and clean up a spill quickly.

With proper management practices, and mitigation by reseeding the area with similar vegetation, no significant environmental issues are anticipated as a result of the proposed action.

5.4 Description of Alternatives

5.4.1 Alternative I

An Alternative Proposed Action could route the sanitary sewer through an alternative route to the north of lagoon cell one. However, the lagoons are surrounded by wetlands on the west, north and east. This alternative route would impact a greater amount of wetland than the proposed action. It would also require a FONPA as well because of impact to wetland. The route is twice as long, would require much more pipe and labor hours, and would require a new easement with private landowners, easily making it a more costly alternative.

5.4.2 No-Action Alternative

The no-action alternative would result in continued deterioration of the sewer main. If no action is taken, the transite piping will continue to fail and emergency repairs will need to be made. Failure would make the base vulnerable to a notice of violation. Pipes would continue to leak and contaminated soil would need treatment by spreading on the ground, and allowing the UV light from the sun kills the pathogens and viruses naturally, which can take several months. As well as unhealthy and potentially unsafe, the process appears unsightly. Damaged sewer pipe will fail to meet current Air Force standards. Without repair or replacement, these pipes would continue to deteriorate until unusable.

5.4.3 Other Reasonable Action Alternatives

None. The proposed Alternative has the least impact to wetlands.

5.5 List of Required Permits

Regulatory Requirements:

This documentation has been prepared in order to comply with the National Environmental Policy Act (NEPA) of 1969, and the Council of Environmental Quality (CEQ) regulations implementing the NEPA. This document is intended to fulfill the requirements for compliance with the Title 40 Code of Federal Regulations (CFR) Parts 1500-1508 and, The Environmental Impact Analysis Process, as promulgated in 32 CFR Part 989.

Permits and Approvals:

The contractor performing the work is responsible for obtaining the relevant permits and accomplishing any required notifications. Applicable regulatory requirements and required coordination before and during construction include a Work Clearance Request to 319 CES Operations; Stormwater Protection Plan, Dust Control Plan, Spill Control Plan, Erosion and Sediment Control Plan, and a Waste Disposal Plan to the 319 CEA Compliance Manager; and copies of all plans to the Contracting Officer. However, the environmental permitting requirements for all work at the Grand Forks AFB site would be coordinated through the 319 Civil Engineer

Squadron Environmental Flight (319 CES/CEA) located at 525 Tuskegee Airmen Blvd, Grand Forks AFB ND 58205-6494.

Because the wetland is potentially jurisdictional, the United States Army Corps of Engineers North Dakota regulatory office does require a Section 404 application for a permit under the Clean Water Act (33USC 401, Section 10; 1413, Section 404) from Grand Forks AFB. USACE will require mitigation as they see fit. This means potentially acre for acre or 3 acres for 1 acre depending on the particular project.

AF 813 Section II Comments:

7. Air Installation Compatible Use Zone/Land Use: The proposed action occurs on previously developed land on Grand Forks AFB encircling the lagoons. The pipe lies underground at Building 801 near the main gate, travels east under 25th St NE (aka B3), and follows the north side of 19th Avenue NE, a gravel road which goes past the Sunflake housing area (in process of demolition), the old Dakota housing area (now demolished), a farmers field (with an easement), until it reaches the lagoon cell #one. On the south side of 19th Ave NE is a deep ditch and tree line with farm land to the south. There is no change in land use as a result of the proposed action. Other than a temporary change in noise levels during operation of equipment during installation, there would be no long term change in noise as a result of this proposed action.

8. Air Quality: No long-term effects; however short term effects involve heavy construction equipment emissions (not a concern as they are mobile sources) and fugitive dust (mentioned on our Title V permit) from earth moving activities. This action is not "regionally significant" and does not require a conformity determination in accordance with 40 CFR 93.153(1). The total emission of criteria pollutants from the proposed action are below the de minimus thresholds and less than 10 percent of the Air Quality Region's planning inventory. Air Quality is considered good and the area is in attainment for all criteria pollutants. Fugitive emissions from construction activities are expected to be below the regulatory threshold and would be managed in accordance with NDAC 33-15-17-03. Best management practices (BMPs) to reduce fugitive emissions would be implemented to reduce the amount of these emissions.

9. Water Resources:

9.1 Groundwater: This action should not incur any major risks of groundwater contamination. All sanitary sewer pipe replacement operations will be under tightly controlled conditions. A mishap could occur with the loaded equipment, however the contractor will have the needed equipment to contain and clean up any spills. Provided best management practices are followed, no impacts to groundwater will occur.

9.2 Surface Water: This action should not incur any major risks of surface water contamination. A mishap could occur with the loaded equipment, however the contractor will have the needed equipment to contain and clean up any spills. Provided best management practices are followed, impacts to surface water will be minimal.

9.3 Water Quality: Provided all containment needs are met and best management practices are used, the proposed action would have minimal impact to water quality.

9.4 Wastewater: Provided best management practices are followed during construction, the proposed action should have minimal impact to wastewater. The proposed action would have a positive impact on wastewater when the project is complete.

10. Safety and Occupational Health: The proposed action would have a positive impact on safety and occupational health when the project is complete, as there will be fewer breaks on which to respond. Participants must wear proper personnel protective equipment while working the construction.

11. Hazardous Materials/Waste: Removal and disposal of concrete pipe would be accomplished in accordance

with asbestos approved handling plans. North Dakota Department of Health has given permission to abandon in place the portions of pipe, excluding the sections of 827' (x2) of pipe adjacent to the lagoons and 50' (x2) of pipe adjacent to Building 801.

12. Biological Resources

12.1 Vegetation: BMPs and control measures, including silt fences and covering of stockpiles, would be implemented to ensure that impacts to biological resources be kept to a minimum. The amount of vegetation disturbed would be kept to the minimum required to complete the action. Disturbed areas should be re-established with an appropriate approved grass seed mixture or sod. This would be a short-term minimal loss of vegetation from construction activities. The project plans to remove and relocate or replace five evergreen trees. There may also be some trees removed due to roots in the path of installation which would also require relocation or replacement to ensure minimal loss.

12.2 Noxious Weeds: Public law 93-629 mandates control of noxious weeds. Limit possible weed seed transport from infested areas to non-infested sites. Avoid activities in or adjacent to heavily infested areas or remove seed sources and propagules from site prior to conducting activities, or limit operations to non-seed producing seasons. Wash or otherwise remove all vegetation and soil from equipment before transporting to a new site. Following activities which expose the soil, mitigate by covering the area with weed seed free mulch and/or seed the area with native species. Covering the soil will reduce the germination of weed seeds, maintain soil moisture, and minimize erosion. If any fill material is used, it should be from a weed-free source.


12.3 Wetlands:

Drainageways and low-lying depressions on Grand Forks AFB have limited and localized wetland habitat. Species most commonly associated with these wetland areas are hairyfruit sedge (*Carex trichocarpa*), needle spike-rush (*Eleocharis acicularis*), flat-stem spike-rush (*E. compressa*), pale spike rush (*E. palustris*), Baltic rush (*Juncus balticus*), grass-leaf rush (*J. marginatus*), knotted rush (*J. nodosus*), poverty rush (*J. tenuis*), Torrey's rush (*J. torreyi*), and chairmaker's bulrush (*Scirpus americanus*). Wetland #LS-02 is a 47 acre alkaline mud flat exhibiting sparse vegetation draining into an emergent marsh wetland located in drainage ditch excavated in upland area. Wetland #LS-04 is a 3.4 acre typical prairie pothole type wetland with cattail, soft rush, common reed, and spike rush. Wetland #LS-05 is a 0.07 acre emergent marsh type wetland with spike rush and sedge located in an excavated drainage ditch adjacent to road. See maps and photos below. Provided best management practices are followed, to include flagging or posting to avoid all activity within the wetland and maintaining a buffer, impacts to wetlands #LS-02 and #LS-04 will be minimal. Provided best management practices are followed, to include reseedling with approved DoT vegetation and mitigation as required by the US Army Corps of Engineers, impacts to wetland #LS-05 will be minimal.

Activity in any wetlands cannot occur without a Clean Water Act section 404 permit from the Army Corps of Engineers. No dumping, filling, dredging, or changing of the wetland hydrologic structure is permitted without a 404 permit from the Army Corps of Engineers. This action requires a 404 permit prior to excavation.

12.4 Wildlife: Construction would have minimal impacts to wildlife. These areas provide foraging habitat for several mammals, such as mice, rabbits, red fox, and Richardson's ground squirrels. There are chorus frogs (*Pseudacris triseriata*) in the nearby wetlands. The area is semi-improved and occasionally maintained by the grounds maintenance contractor. Due to the mobility of these species and the profusion of similar landscaped areas in the general vicinity, any wildlife disturbed would be able to find similar habitat in the local area.

12.5 Threatened or Endangered Species: According to the recent surveys at GFAFB, there are 11 state listed bird species, 52 federal and state bird species of concern, four state listed plant species, and one potential federal candidate amphibian listing. Proposed activities should have minimal impact on these sensitive species.

1. COMPONENT AIR FORCE		FY 2016 PROJECT DATA (computer generated)		2. DATE 1-8-09	
3. INSTALLATION AND LOCATION GRAND FORKS AIR FORCE BASE, NORTH DAKOTA			4. PROJECT TITLE REPLACE SANITARY SEWER MAIN (801 TO LAGOONS) (S/E)		
5. PROGRAM ELEMENT 41978	6. CATEGORY CODE 832-286	7. PROJECT NUMBER JFED200803	8. PROJECT COST (\$000) SEIC 52400 1,078.1		
9. COST ESTIMATES					
ITEM		U/M	QUANTITY	UNIT COST	AMT (\$000)
PRIMARY FACILITIES					842.9
SAN SEWER MAIN		LF	7,500	115	(842.5)
SUBTOTAL					842.5
PROFIT AND OVERHEAD (25.0%)					215.6
TOTAL FUNDED COST					1,078.1
UNFUNDED COST (0.0%)					0.0
TOTAL REQUEST					1,078.1
10. Description of Proposed Work: Replace two lines of 100 weight transite pipe (7,500 LF) with new C-900 pipe. Provide air vents and relief valves where required. Backfill and compact the area and provide site restoration.					
11. Requirement: As Required.					
PROJECT: REPLACE SANITARY SEWER MAIN (801 TO LAGOONS) (S/E) (Current Mission)					
REQUIREMENT: Replace two lines of 100 weight transite pipe (7,500 LF) with new C-900 pipe. Provide air vents and relief valves where required. Backfill and compact the area and provide site restoration. Transite piping will be handled and disposed of in accordance to all State, Federal, and Local regulations.					
CURRENT SITUATION: Emergency repairs were performed three times in the last year. The existing transite pipe Forced Main is deteriorating and is beginning to develop leaks.					
IMPACT IF NOT PROVIDED: Transite piping will continue to fail and emergency repairs will need to be made. Failure would make the base vulnerable to a notice of violation.					
 MARY C. GILTNER, YF-03, DAFB Deputy Base Civil Engineer					

APPENDIX B
Public Notice of Availability

AIR FORCE BASE PUBLIC NOTICE
Grand Forks Air Force Base has proposed the replacement of sanitary sewer force main pipe from Bldg 801 to the lagoons in a wetland area near the lagoon on base property. A permanent seven foot easement will be acquired. An environmental assessment has been conducted and a finding of no practicable alternative (FONPA) has been determined for this action. Anyone wishing to view the support documents to this action should contact the 319th Air Refueling Wing Public Affairs Office within the next 30 days at 747-7072 or the web site <http://www.grandforks.af.mil/library/>.
(August 10, 12, 2010)

AFFIDAVIT OF PUBLICATION

STATE OF NORTH DAKOTA } SS.
COUNTY OF GRAND FORKS }

Wicky Straub of said State and County being first duly sworn, do oath says:

That { she } is { a representative of the GRAND FORKS HERALD, INC.,

publisher of the Grand Forks Herald, Morning Edition, a daily newspaper of general circulation, printed and published in the City of Grand Forks, in said County and State, and has been during the time hereinafter mentioned, and that the advertisement of

Air Force Base Public Notice

a printed copy of which is hereto annexed, was printed and published in every copy of the following issues of said newspaper, for a period of 2 time (s) to wit:

<u>8/10</u>	Yr. <u>10</u>	Yr. _____
<u>8/12</u>	Yr. <u>10</u>	Yr. _____
_____	Yr. _____	Yr. _____
_____	Yr. _____	Yr. _____

and that the full amount of the fee for the publication of the annexed notice inures solely to the benefit of the publishers of said newspaper; that no agreement or understanding for a division thereof has been made with any other person and that no part thereof has been agreed to be paid to any person whomsoever and the amount of said fee is \$ 20.16;

Publication Fee \$ 20.16

That said newspaper was, at the time of the aforesaid publication, the duly elected and qualified Official Newspaper within said County, and qualified in accordance with the law of the State of North Dakota to do legal printing in said County and State.

Elaine Fawcett
ELAINE FAWCETT
NOTARY PUBLIC
STATE OF NORTH DAKOTA
My Commission Expires: Feb 7

Subscribed and sworn to before me this 12 day of Aug A.D. 10

Elaine Fawcett
Notary Public, Grand Forks, ND

AIR FORCE BASE

PUBLIC NOTICE

Grand Forks Air Force Base has proposed the replacement of sanitary sewer force main pipe from Bldg 801 to the lagoons in a wetland area near the lagoon on base property. A permanent seven foot easement will be acquired. An environmental assessment has been conducted and a finding of no practicable alternative (FONPA) has been determined for this action. Anyone wishing to view the support documents to this action should contact the 319th Air Refueling Wing Public Affairs Office within the next 30 days at 747-7072 or the web site <http://www.grandforks.af.mil/library/>.

TRAILERS

Public Notices

AIR FORCE BASE PUBLIC NOTICE

Grand Forks Air Force Base has proposed the replacement of sanitary sewer force main pipe from Bldg 801 to the lagoons in a wetland area near the lagoons on base property. A permanent seven foot easement will be acquired. An environmental assessment has been conducted and a finding of no practicable alternative (FONPA) has been determined for this action. Anyone wishing to view the support documents to this action should contact the 319th Air Refueling Wing Public Affairs Office within the next 30 days at 747-7072 or the web site <http://www.grandforks.af.mil/library/>. (August 10, 12, 2010)

DOCUMENT 00 10 50
ADVERTISEMENT FOR
CONSTRUCTION BIDS

(ad to run in GF Herald July 29, August 5 and 12, 2010)

Project: Renovation for Early Head Start

University of North Dakota - Building 292

920 Northwestern Dr.

Grand Forks, ND 58202

Architect's Project Number: 2010-14

Owner: State Board of Higher Education (acting by and through the University of North Dakota)

University of North Dakota

PO Box 7107

Grand Forks, 58202-7107

By: Hepper Olson Architects, Ltd.

429 Broadway St

PO Box 147

Buxton, ND 58218

Phone: 701-841-1000

Fax: 701-841-1001

bobbi@hepperolson.com

Bids Close: Thursday, August 19, 2010

at 2:00 p.m. CDT

Bids received after the designated time will not be accepted. Bids will be opened and publicly read aloud. It is the bidder's responsibility to see that mailed or delivered bids are in the hands of the Owner prior to bid opening.

Bid Place: The Cottonwood Room

UND Facilities Building, at the University of North Dakota

Grand Forks, ND 58202

Outline of Project: Renovation of 4-plex into an Early Head Start Facility. Project includes but is not limited to: selective demolition; miscellaneous framing; sheetrocking; insulation; doors; flooring; painting; millwork; modifications and upgrades to plumbing, lighting, HVAC; fire sprinkler system; fencing; and playground equipment.

Type of Bids: Bids will be received for the following divisions of work, separately or combined.

General Construction (including electrical)

Mechanical Construction

Obtaining Documents: Drawings and Specifications may be examined at the following:

Hepper Olson Architects, 429 Broadway St, Buxton, ND 58218

Drawings and Specifications may be seen at the following Building Exchanges:

Grand Forks Builders Exchange

FM Builders & Traders, Fargo, ND

Bismarck/Mandan Builders Exchange,

Mandan ND

Construction Plans Exchange, Bismarck, ND

Minot Builders Exchange

Devils Lake Builders Exchange

McGraw Hill/Construction Dodge Reports/SCAN Service - Minneapolis, MN

Reed Construction Data

Qualified Bidders may obtain Drawings and Specifications from the Architect upon a deposit of \$50 which is refunded if a bona fide bid is submitted and plans are returned in good condition.

Bid Security: That each bid must be accompanied by a separate envelope containing the contractor's license and bid security. The bid security must be in a sum equal to five percent of the full amount of the bid and must be in the form of a bidder's bond. A bidder's bond must be executed by the bidder as principal and by a surety, conditioned that if the principal's bid is accepted and the contract awarded to the principal, the principal, within ten

2010-14 Invitation to Bid 00 10 50 - 2 days after notice of the award, shall execute a contract in accordance with the

Public Notices

301 6th St.
Emerado, ND 58228

The title owners of the following described real property:

Lot 5, Block 5, Folsom's 4th Addition, Emerado, North Dakota, Grand Forks County, North Dakota, aka 301 6th St., Emerado, ND 58228.

Notice is hereby given that certain mortgage upon the above-described property, Karen L. Shadle and Leonard D. Shadle, Mortgagors, executed and delivered to Freedom Mortgage Corporation as nominee for Mortgage Electronic Registration Systems, Inc., Mortgagee, dated April 30, 2007, and filed for record in the office of the Register of Deeds of the County of Grand Forks and State of North Dakota, on the 2nd day of May, 2007, at 9:00 o'clock AM, as document number 662203; which mortgage will be assigned to Chase Home Finance, LLC by an Assignment of Mortgage, and which mortgage is being serviced by Chase Home Finance, LLC, and given to secure the payment of \$93,860.00, and interest according to the conditions of a certain promissory note, is in default.

NOTICE

Pursuant to the provisions of the Federal Fair Debt Collection Practices Act, you are advised that unless you dispute the validity of the foregoing debt or any portion thereof within thirty days after receipt of this letter, we will assume the debt to be valid. On the other hand, if the debt or any portion thereof is disputed, we will obtain verification of the debt and will mail you a copy of such verification. You are also advised that upon your request within the thirty day period, we will provide you with the name and address of your original creditor, if different from the creditor referred to in this Notice. We are attempting to collect a debt and any information obtained will be used for that purpose.

At this time, no attorney with this firm has personally reviewed the particular circumstances of your account. However, if you fail to contact our office, our client may consider additional remedies to recover the balance due.

The following is a statement of the sum due for principal, interest, taxes, insurance, maintenance, etc., as of August 8, 2010:

Principal: \$90,391.31

Escrow Advance: 546.41

Accrued interest to August 9, 2010:

2,576.88

Late Charges: 45.00

Recording Fees: 10.00

Fax Fees: 30.00

Pro Rata MIP/PMI: 106.38

Property Inspection: 14.00

TOTAL: \$93,719.98

That as of August 8, 2010, the amount due to cure any default, or to be due under the terms of the mortgage, exists in the following respects:

Accumulated Payments Owning:

\$4,402.34

Principal & Interest:

5 months @ \$593.26 = \$2,966.30

Escrow:

1 months @ \$308.52

4 months @ \$275.36 = \$1,101.44

Shortage/Overage:

4 months @ \$6.52 = \$26.08

Late Charges: 45.00

Pro Rata MIP/PMI: 15.00

Property Inspection: 14.00

TOTAL: \$4,476.34

All of which must be paid BY CERTIFIED FUNDS, MADE PAYABLE TO CHASE HOME FINANCE, LLC and mailed to the undersigned attorney to cure the default, plus any accrued interest, subsequent payments or late charges which become due and any further expenses for preservation of the property which may be advanced. PLEASE CONTACT THE UNDERSIGNED FOR THE EXACT AMOUNT DUE THROUGH A CERTAIN DATE.

You have the right, in accordance with the terms of the mortgage, to cure the default specified above. You also have the right to assert in the foreclosure action that no default exists or any other defense you may have to said action.

Notice is further given that if the total sums in default, together with interest accrued thereon at the time of such payment, accrued payments then due and expenses advanced, are not paid within thirty (30) days from the date of mailing or service of this Notice, the Mortgagee will

Public Notices

section, 303 feet to the true point of beginning; thence continuing West, along said South line, 303 feet; thence North, parallel with the East line of said section, 359.41 feet; thence East, parallel with the South line of said section, 303 feet; thence South to the true point of beginning aka 1808 15th Ave NE, Grand Forks, ND 58201.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this 15th day of July, 2010.

Dan Hill /ss

Sheriff of Grand Forks County

North Dakota

By: Greg Sampson /ss

Deputy

STATE OF NORTH DAKOTA

County of Grand Forks

On this 15th day of July, 2010, before me, a Notary Public in and for said County and State, personally appeared Greg Sampson, known to me to be the person who is described in, and whose name is subscribed to this instrument.

Sherry Burkholder /ss

Notary Public

Grand Forks County, North Dakota

My Commission expires: 9-7-12

MACKOFF KELLOGG LAW FIRM

P.O. Box 1097

Dickinson, ND 58602-1097

Attorneys for Plaintiff

(July 29, August 5, 12, 2010)

NOTICE

Pursuant to the provisions of the Federal Fair Debt Collection Practices Act, you are advised that unless you dispute the validity of the foregoing debt or any portion thereof within thirty days after receipt of this letter, we will assume the debt to be valid. On the other hand, if the debt or any portion thereof is disputed, we will obtain verification of the debt and will mail you a copy of such verification. You are also advised that upon your request within the thirty day period, we will provide you with the name and address of your original creditor, if different from the creditor referred to in this Notice. We are attempting to collect a debt and any information obtained will be used for that purpose.

At this time, no attorney with this firm has personally reviewed the particular circumstances of your account. However, if you fail to contact our office, our client may consider additional remedies to recover the balance due.

NOTICE BEFORE FORECLOSURE

TO:

Lawrence Gardner

311 Adam Street North

Northwood, ND 58267

Tracy S. Gardner

311 Adam Street North

Northwood, ND 58267

Occupant

311 Adam Street North

Northwood, ND 58267

Lawrence Gardner

2248 Honeysuckle Lane

Sumter, SC 29150-2320

Tracy S. Gardner

2248 Honeysuckle Lane

Sumter, SC 29150-2320

The title owners of the following described real property:

Lot Five (5) and the South Eighteen (18) Feet of Lot Four (4), in Block Two (2), Berg's First Addition to Northwood, According to the Plat Thereof on File in the Office of the County Recorder Within and for Grand Forks County, N.D., and Recorded in Book "12" of Deeds, Page 621; a/k/a 311 North Adam Street, Northwood, ND 58267.

Notice is hereby given that certain mortgage upon the above-described property, Lawrence Gardner and Tracy S. Gardner, Mortgagors, executed and delivered to Wells Fargo Home Mortgage, Inc., Mortgagee, dated March 22, 2002, and filed for record in the office of the Register of Deeds of the County of Grand Forks and State of North Dakota, on the 25th day of March 2002, at 2:00 o'clock P.M. as Document No. 593109, and given to secure the payment of \$58,950.00, and interest according to the conditions of a certain promissory note, is in default.

Effective May 5, 2005, an Agreement of Merger was executed and filed with the California Secretary of State Office to convert Wells Fargo Home Mortgage, Inc. into Wells Fargo Bank, N.A.

The following is a statement of the sum due for principal, interest, taxes,

Public Notices

Dickinson, North Dakota 58601

Tel: (701) 227-1841

Fax: (701) 225-6878

By: Sandra K. Kuntz /ss

Attorney #05186

If you have previously received a discharge in a Chapter 7 bankruptcy, this is not an attempt to collect a debt against you personally, but only an attempt to determine your intention concerning retaining this property.

(July 29, August 5, 12, 2010)

PUBLIC NOTICE

FEMA-1907-DR-ND

As Amended

The Federal Emergency Management Agency (FEMA) hereby gives notice to the public of its intent to reimburse applicants for eligible costs to repair and / or replace facilities damaged by flooding beginning February 26, 2010, and continuing until July 15, 2010. This notice applies to the Public Assistance (PA) and Hazard Mitigation Grant Programs (HMGP) implemented under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121-5206.

Under a major disaster declaration (FEMA-1907-DR-ND) signed by the President on April 30, 2010, the following counties were designated as adversely affected by the flooding and eligible for Public Assistance: Barnes, Benson, Cass, Dickey, Emmons, Foster, Grand Forks, LaMoure, Stutsman, Traill, Walsh and Wells Counties and the portions of the Spirit Lake Reservation that lie within these counties. On May 24, 2010, FEMA-1907-DR-ND was amended to include Eddy and McIntosh Counties for Public Assistance. On July 13, 2010, FEMA-1907-DR-ND was amended to include Bottineau, Kidder, McHenry, Renneville and Ward Counties for Public Assistance. Additionally, all counties and Tribes in North Dakota have been designated as eligible for HMGP.

This public notice concerns activities that may affect historic properties, activities that are located in or affect wetland areas or the 100-year floodplain, and critical actions within the 500-year floodplain. Such activities may adversely affect the historic properties, floodplains or wetlands, or may result in continuing vulnerability to flood damage.

Presidential Executive Orders 11988 and 11990 require that all federal actions in or affecting floodplains or wetlands be reviewed for opportunities to relocate, and be evaluated for social, economic, historic, environmental, legal, and safety considerations. Where there is no opportunity to relocate, FEMA is required to undertake a detailed review to determine what measures can be taken to minimize future damages. The public is invited to participate in the process of identifying alternatives and analyzing their impacts.

FEMA has determined that for certain types of facilities there are normally no alternatives to restoration in the floodplain / wetland. These are facilities that meet all of the following criteria: 1) FEMA's estimate of the cost of repairs is less than 50% of the cost to replace the entire facility, and is less than \$100,000; 2) the facility is not located in a floodway; 3) the facility has not sustained major structural damage in a previous Presidential declared flooding disaster or emergency; and 4) the facility is not critical (e.g., the facility is not a hospital, generating plant, emergency operations center, or a facility that contains dangerous materials, etc.). FEMA intends to provide assistance for the restoration of these facilities to their pre-disaster condition, except that certain measures to mitigate the effects of future disaster events may be included in the work. For example, a bridge or culvert restoration may include a larger waterway opening to decrease the risk of future washouts. For routine activities, this will be the only public notice provided. Other activities and those involving facilities that do not meet the four above criteria are required to undergo more detailed review, including study of alternate locations. Subsequent public notices regarding such projects will be published, if necessary, as more specific information becomes available.

In many cases an applicant may have

From: [WALLER, RACHEL R A1C USAF AMC 319 ARW/PA](#)
To: [STROM, DIANE M GS-11 USAF AMC 319 CES/CEAO](#)
Cc: [WASEM, ANASTASIA D 1Lt USAF AMC 319 ARW/PA](#)
Subject: RE: Public Comments on EA for Sanitary Sewer in 30 day public review
Date: Thursday, September 09, 2010 10:22:04 AM

Good morning,

PA has not received any comments concerning the EA for Sanitary Sewer. Also, I was just recently married and took my husband's last name of Waller.

Very respectfully,

A1C RACHEL R. (MARTINEZ) WALLER, USAF
319 Air Refueling Wing Public Affairs
Grand Forks AFB, N.D.
(701) 747-5023

-----Original Message-----

From: STROM, DIANE M GS-11 USAF AMC 319 CES/CEAO
Sent: Thursday, September 09, 2010 10:13 AM
To: WASEM, ANASTASIA D 1Lt USAF AMC 319 ARW/PA
Cc: WALLER, RACHEL R A1C USAF AMC 319 ARW/PA
Subject: Public Comments on EA for Sanitary Sewer in 30 day public review

Has your office had any comments on the Environmental Assessment for the Sanitary Sewer project which has been in a 30 day public review period since August 10th?

Also, please provide an email address for A1C Martinez as the new Environmental PA for GFAFB.

Thank you,

Diane M. Strom
Environmental Impact Analysis Program (EIAP)
319 CES/CEAO
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205-6434
Phone 701-747-6394
Fax 701-747-6155
Cell 218-779-5296
NOTE my new email address:
diane.strom@us.af.mil

-----Original Message-----

From: WASEM, ANASTASIA D 1Lt USAF AMC 319 ARW/PA
Sent: Wednesday, September 08, 2010 4:17 PM
To: RUNDQUIST, KRISTEN A GS-11 USAF AMC 319 CES/CEAN
Cc: WALLER, RACHEL R A1C USAF AMC 319 ARW/PA
Subject: RE: KICK-OFF meeting EA for Chemical Treatment of Nuisance Species

Ms. Rundquist,

Can you please add A1C Martinez to any distro list that would involve PA

please and also make her the POC. She will be taking over Environmental PA since I am about to PCS. Thank you!

Very Respectfully,

STACIA D. WASEM, 1st Lt, USAF
Chief, Public Affairs
319th Air Refueling Wing
Grand Forks Air Force Base, North Dakota
DSN 362-5023 Commercial 701-747-5023

www.grandforks.af.mil

APPENDIX C
Interagency Correspondence



NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov



August 12, 2010

Ms. Diane M. Strom
Environmental Impact Analysis Program
319 CES/CEVA
525 Tuskegee Airmen Blvd.
Grand Forks AFB, ND 58205-6434

Re: Revised Draft EA for Sanitary Sewer Force Main Pipe Replacement
Grand Forks Air Force Base, Grand Forks County

Dear Ms. Strom:

This department has reviewed the information concerning the above-referenced project submitted under date of August 9, 2010, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, our comments remain the same as those in our July 6, 2010 letter to you (copy attached).

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,

L. David Glatt, P.E., Chief
Environmental Health Section

LDG:cc
Attach.

Rec 17 Aug 10



NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov



July 6, 2010

Ms. Diane M. Strom
Environmental Impact Analysis Program
319 CES/CEAO
525 Tuskegee Airmen Blvd.
Grand Forks AFB, ND 58205-6434

Re: Sanitary Sewer Force Main Pipe Replacement
Grand Forks Air Force Base, Grand Forks County

Dear Ms. Strom:

This department has reviewed the information concerning the above-referenced project submitted under date of June 22, 2010, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

1. All necessary measures must be taken to minimize fugitive dust emissions created during construction activities. Any complaints that may arise are to be dealt with in an efficient and effective manner.
2. All necessary measures must be taken to minimize the disturbance of any asbestos-containing material and to prevent any asbestos fiber release episodes. Any facility that is to be renovated or demolished must be inspected for asbestos. Notification of the Department's Division of Air Quality (701-328-5188) is required before any demolition. Removal of any friable asbestos-containing material must be accomplished in accordance with section 33-15-13-02 of the North Dakota air pollution control rules. Removal of transite pipes that are not friable or that will not be crumbled, pulverized or reduced to powder is considered a non-regulated activity and is not subject to the North Dakota Air Pollution Control rules.
4. Noise from construction activities may have adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise effects can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours.

Environmental Health
Section Chief's Office
701.328.5150

Division of
Air Quality
701.328.5188

Division of
Municipal Facilities
701.328.5211

Division of
Waste Management
701.328.5166

Division of
Water Quality
701.328.5210

Ms. Diane M. Strom

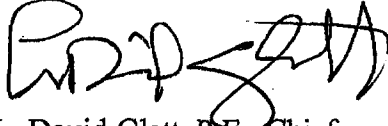
2.

July 6, 2010

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,

A handwritten signature in black ink, appearing to read 'L. David Glatt', written over a faint, illegible stamp.

L. David Glatt, P.E., Chief
Environmental Health Section

LDG:cc



Community Services Economic Development & Finance Tourism Workforce Development

August 11, 2010

Diane M. Strom
Dept. of the Air Force
319 CES/CEAO
525 Tuskegee Airmen Blvd
Grand Forks AFB, ND 58205-6434

"Letter of Clearance" In Conformance with the North Dakota Federal Program Review System -
State Application Identifier No.: ND100811-0386

Dear Ms. Strom:

SUBJECT: Draft EA - Replace Sanitary Sewer from Bldg. 801 to Lagoons

The above referenced EA has been reviewed through the North Dakota Federal Program Review Process. As a result of the review, clearance is given to the project only with respect to this consultation process.

If the proposed project changes in duration, scope, description, budget, location or area of impact, from the project description submitted for review, then it is necessary to submit a copy of the completed application to this office for further review.

We also request the opportunity for complete review of applications for renewal or continuation grants within one year after the date of this letter.

Please use the above SAI number for reference to the above project with this office. Your continued cooperation in the review process is much appreciated.

Sincerely,

A handwritten signature in black ink, which appears to read "James R. Boyd".

James R. Boyd
Manager of Governmental Services
Division of Community Services

jml

Rec 16 Aug 10

"We lead North Dakota's efforts to attract, retain and expand wealth."



**STATE
HISTORICAL
SOCIETY
OF NORTH DAKOTA**

John Hoeven
Governor of North Dakota

August 18, 2010

**North Dakota
State Historical Board**

Chester E. Nelson, Jr.
Bismarck - President

Gerold Gerntholz
Valley City - Vice President

Richard Kloubec
Fargo - Secretary

Albert I. Berger
Grand Forks

Calvin Grinnell
New Town

Diane K. Larson
Bismarck

A. Ruric Todd III
Jamestown

Sara Otte Coleman
*Director
Tourism Division*

Kelly Schmidt
State Treasurer

Alvin A. Jaeger
Secretary of State

Mark A. Zimmerman
*Director
Parks and Recreation Department*

Francis Ziegler
*Director
Department of Transportation*

Merlan E. Paaverud, Jr.
Director

*Accredited by the
American Association
of Museums since 1986*

Ms. Diane M. Strom
Environmental Impact Analysis Program (EIAP)
319 CES/CEVA
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205-6434

ND SHPO 97-0527CF: Sanitary Sewer Force Main Pipe replacement from the main gate lift station to the lagoons at Grand Forks Air Force Base, North Dakota

Dear Ms. Strom,

We re-reviewed ND SHPO 97-0527CF: Sanitary sewer Force Main Pipe replacement from the main gate lift station to the lagoons at Grand Forks Air Force Base, North Dakota, and concur with your "No Historic Properties Affected" determination, provided the project remains as described in the Draft EA on the replacement of Sanitary Sewer from Building 801 to Lagoons at Grand Forks AFB, North Dakota, dated August 2010, and in the same location.

Thank you for the opportunity to review this project. If you have any questions please contact Susan Quinnell, at (701) 328-3576 or squinnell@nd.gov. Thank you for the excellent documentation package, and the opportunity to review.

Sincerely,

Merlan E. Paaverud, Jr.
State Historic Preservation Officer (North Dakota)

Rec 23 Aug 10

From: [Schumacher, John D.](#)
To: [STROM, DIANE M.GS-11 USAF AMC 319 CES/CEAO](#)
Subject: RE: Grand Forks AFB to Replace Sanitary Sewer from Bldg 801 to Lagoons: NDDC #ND100623-0301 and #ND SHPO 97-0527CF
Date: Wednesday, September 01, 2010 4:58:12 PM

Ms. Strom,

The North Dakota Game and Fish Department has reviewed this project for wildlife concerns. We do not believe it will have any significant adverse effects on wildlife or wildlife habitat, including endangered species, provided any wetland impacts are avoided or mitigated in kind.

JOHN SCHUMACHER
RESOURCE BIOLOGIST
ND GAME AND FISH DEPT
701.328.6321



"STROM, DIANE M GS-11
USAF AMC 319 CES/CEAO"
<diane.strom@us.af.mil>

08/09/2010 09:19 AM

To "(carole.mcmahon@gfcounty.com)"
<carole.mcmahon@gfcounty.com>, "(info@mhanation.com)"
<info@mhanation.com>, "(ironheart@spiritalakenation.com)"

cc

bcc

Subject Review of Project at Grand Forks AFB to Replace Sanitary
Sewer from Bldg 801 to Lagoons: NDDC #ND100623-0301
and #ND SHPO 97-0527CF

Grand Forks AFB is proposing a sanitary sewer force main pipe replacement from the main gate lift station (Building 801) to the lagoons. The project is described in the attached revised version of the Environmental Assessment.

The EA was sent to you previously on June 22, 2010. Revisions were made based on comments from HQ AMC. The EA is also being readvertised for Public Review because the seven foot permanent easement was added to the Proposed Action.

To ensure that all social, economic and environmental effects are considered in the development of this project, we are soliciting your comments and coordination on the proposed project per the National Environmental Policy Act (NEPA) of 1969.

Please send your comments to me by Sep 7, 2010. Thank you very much for your participation.

Diane M. Strom
Environmental Impact Analysis Program (EIAP)
319 CES/CEAO
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205-6434
Phone 701-747-6394
Fax 701-747-6155
Cell 218-779-5296
NOTE my new email address:
diane.strom@us.af.mil



Draft EA.pdf

U.S. FISH AND WILDLIFE SERVICE

ECOLOGICAL SERVICES ND FIELD OFFICE

Project as described will have no significant impact on fish and wildlife resources. No endangered or threatened species are known to occupy the project area. IF PROJECT DESIGN CHANGES ARE MADE, PLEASE SUBMIT PLANS FOR REVIEW.

9-17-10

Date

Jeffrey K. Towner

Jeffrey K. Towner
Field Supervisor

DEPARTMENT OF THE INTERIOR
U.S. FISH & WILDLIFE SERVICE
3425 MIRIAM AVENUE
BISMARCK ND 58501

OFFICIAL USE
Penalty for Private Use, \$300

Rec 22 Sep 10

From: Kade [kade@metiscrc.com]
Sent: Monday, August 09, 2010 11:45 AM
To: STROM, DIANE M GS-11 USAF AMC 319 CES/CEAO
Subject: Review of Project at Grand Forks AFB to Replace Sanitary Sewer from Bldg 801
to Lagoons: NDDC #ND100623-0301 and #ND SHPO 97-0527CF

No comment from Turtle Mountain.

Strom, Diane Civ USAF AMC 319 CES/CEAO

From: Frank Black Cloud [frankbc@spiritlakenation.com]
Sent: Tuesday, June 29, 2010 1:35 PM
To: Strom, Diane Civ USAF AMC 319 CES/CEAO
Subject: GF AFB lagoon

Ms. Strom,

In regards to the letter on the Grand Forks AFB proposition of replacement of the sanitary sewer force main pipe from the main gate lift station to the lagoons. Spirit Lake Tribe has no issues or concerns with this effort. We see no ill effects from the project and don't see any impact to the tribe. Please accept this email as the tribe position on this issue.

If you should have any other questions or issues please give me a call or send me an email and I will do my best to assist where I can.

Sincerely,

Frank Black Cloud

Frank E. Black Cloud
Spirit Lake Tribe
Renewable Resource Dept.
PO Box 99
Fort Totten, ND 58335
701-766-1709 Office
701-766-1218 Fax
frankbc@spiritlakenation.com

"We do not inherit the Earth from our ancestors; we borrow it from our children."

'This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please delete this message. Please note that any views or opinions presented in this email are solely those of the author and do not necessarily represent those of the Spirit Lake Tribe. The Spirit Lake Tribe accepts no liability for any damage caused by any virus transmitted by this email.'

APPENDIX D

US Army Corps of Engineers Section 404 Permit

From: [RUNDQUIST, KRISTEN A GS-11 USAF AMC 319 CES/CEAN](#)
To: [STROM, DIANE M GS-11 USAF AMC 319 CES/CEAO](#)
Subject: FW: NWP #12 for GFAFB Sewer Repair/Replacement
Date: Thursday, July 29, 2010 8:35:20 AM

-----Original Message-----

From: Crooke, Patsy J NWO [<mailto:Patsy.J.Crooke@usace.army.mil>]
Sent: Thursday, July 29, 2010 8:33 AM
To: RUNDQUIST, KRISTEN A GS-11 USAF AMC 319 CES/CEAN
Subject: RE: NWP #12 for GFAFB Sewer Repair/Replacement

Kristen:

Yes, your work can proceed under the guidance of NWP #12. No mitigation is required since each crossing is under the 1/10th acre.

Thank you

Patsy

Patsy Crooke
Project Manager
USACE/NDRO
1513 S 12th Street
Bismarck, ND 58504
701.255.0015
FAX: 701.255.4917
patsy.j.crooke@usace.army.mil

-----Original Message-----

From: RUNDQUIST, KRISTEN A GS-11 USAF AMC 319 CES/CEAN
[<mailto:kristen.rundquist@us.af.mil>]
Sent: Wednesday, July 28, 2010 3:22 PM
To: Crooke, Patsy J NWO
Subject: NWP #12 for GFAFB Sewer Repair/Replacement

Patsy,

Hello, thank you for the phone conversation on July 8th regarding the recent NWP #12 issued to GFAFB for the sewer/sanitary repair/replacement project. I attached the NWP issued to us for your convenience.

I am emailing to verify and summarize in short the information I received from you on July 8th. The Corp made a preliminary determination that the project affected wetlands are jurisdictional. Each wetland affected is considered a project, and because the affected acreage of each wetland is less than 1/10th of an acre we do not have to mitigate under Nation Wide Permit #12. Any jurisdictional wetland over 1/10th requires mitigation under this NWP #12.

In addition, we are not required to submit a preconstruction notification either, as we do not qualify under any of the listed criteria shown on page 2 of the NWP #12 factsheet attached. The nationwide permit has several BMP's we are required to follow, and these are listed in the permit.

If I missed anything please let me know.

Thanks for your help and assistance.

Respectfully,
Kristen

**U.S. Army Corps of Engineers
North Dakota Regulatory Office
1513 South 12th Street
Bismarck, North Dakota 58504
Telephone (701) 255-0015 Fax (701) 255-4917**

IMPORTANT INSTRUCTIONS FOR OUR PERMIT CUSTOMERS

Notice of the Reissuance of Nationwide Permits was published in the Federal Register [72 FR 11092] on March 12, 2007. The Nationwide Permits went into effect on March 19, 2007. Project compliance certification is required by General Condition 26. The following instructions are provided to clarify the information contained within the nationwide permit authorization letter and attachments.¹

STEP 1

Review the permit authorization and be sure you understand the terms and conditions for the authorization to remain valid. If you do not understand, or have any questions, please do not hesitate to contact this office at the above address.

STEP 2

Complete your project in accordance with the permit terms and conditions. [Remember that any deviation from the original plans and specifications of your project could require additional authorization from this office.]

STEP 3

Within thirty (30) days of project completion, please complete the permit compliance certification contained within your permit authorization letter. A photocopy of the first page (marked with a colored COPY stamp) has been provided for this purpose. Mark the applicable statements, sign and date where indicated, and forward the COPY to this office at the above address.

¹There is no charge associated with any aspect of this nationwide authorization or the follow-up compliance certification.

MEMORANDUM FOR: Grand Forks Air Force Base
ATTN: Mary C. Giltner
Deputy Base Civil Engineer
319 CES/CD
525 Tuskegee Airmen Blvd
Grand Forks, North Dakota 58205-6434

SUBJECT: Authorization for Section 404 Permit – Authorization Number NWO-2008-2903-BIS

1. **Project Authorization.** We have reviewed your June 15, 2020, request, for Department of the Army (DA) authorization to replace and/or repair the sanitary sewer force main leading to the lagoons treatment system on the Grand Forks Air Force Base. We have prepared a preliminary jurisdictional determination (JD) for the sites which is a written indication that the waterways within the project area may be a jurisdictional Waters of the United States. Such waters have been treated as jurisdictional Waters of the U.S. for purposes of computation of impacts and compensatory mitigation requirements. If you concur with the findings of the enclosed preliminary JD, please sign it and return it to the letterhead address.

If you believe the preliminary JD is inaccurate, you may request this office complete an approved JD prior to your commencement of any work in a Water of the U.S. An approved JD is an official determination regarding the presence or absence of Waters of the U.S. Completion of an approved JD may require coordination with the U.S. Environmental Protection Agency.

If you do not want the Corps to complete an approved JD, you may proceed with the proposed project in accordance with the terms and conditions of Department of the Army Nationwide Permit No. 12, found in the March 12, 2007 Federal Register (72 FR 11092), Reissuance of Nationwide Permits. Enclosed is a fact sheet that fully describes this Nationwide Permit and lists the General Conditions and the Section 401 Water Quality Certification Requirements, if applicable, that must be followed for this authorization to remain valid. **Please note, any deviations from the original plans and specifications of your project could require additional authorization from this office.**

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2012. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

2. **Project Location.** The legal description at the project site is Section 29, Township 152 North Range 52 West, Grand Forks County, North Dakota.

3. **Project Compliance Certification.** *In compliance with General Condition 26, you are required to submit the following project compliance certification within thirty (30) days of project completion. [Please check all applicable statements]*

- ☐ I certify that I have completed the project as permitted.
- ☐ I certify that I have completed a modified version of the project.
- ☐ I certify that I have completed all required mitigation.

Permittee's Signature: _____ Date: _____

4. **Other Authorizations.** This determination is applicable only to the permit program administered by the US Army Corps of Engineers. It does not eliminate the need to obtain other Federal, state, tribal, and local approvals before beginning work.

MEMORANDUM FOR: Grand Forks Air Force Base
ATTN: Mary C. Giltner
Deputy Base Civil Engineer
319 CES/CD
525 Tuskegee Airmen Blvd
Grand Forks, North Dakota 58205-6434

SUBJECT: Authorization for Section 404 Permit – Authorization Number NWO-2008-2903-BIS

1. **Project Authorization.** We have reviewed your June 15, 2020, request, for Department of the Army (DA) authorization to replace and/or repair the sanitary sewer force main leading to the lagoons treatment system on the Grand Forks Air Force Base. We have prepared a preliminary jurisdictional determination (JD) for the sites which is a written indication that the waterways within the project area may be a jurisdictional Waters of the United States. Such waters have been treated as jurisdictional Waters of the U.S. for purposes of computation of impacts and compensatory mitigation requirements. If you concur with the findings of the enclosed preliminary JD, please sign it and return it to the letterhead address.

If you believe the preliminary JD is inaccurate, you may request this office complete an approved JD prior to your commencement of any work in a Water of the U.S. An approved JD is an official determination regarding the presence or absence of Waters of the U.S. Completion of an approved JD may require coordination with the U.S. Environmental Protection Agency.

If you do not want the Corps to complete an approved JD, you may proceed with the proposed project in accordance with the terms and conditions of Department of the Army Nationwide Permit No. 12, found in the March 12, 2007 Federal Register (72 FR 11092), Reissuance of Nationwide Permits. Enclosed is a fact sheet that fully describes this Nationwide Permit and lists the General Conditions and the Section 401 Water Quality Certification Requirements, if applicable, that must be followed for this authorization to remain valid. **Please note, any deviations from the original plans and specifications of your project could require additional authorization from this office.**

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2012. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

2. **Project Location.** The legal description at the project site is Section 29, Township 152 North Range 52 West, Grand Forks County, North Dakota.

3. **Project Compliance Certification.** *In compliance with General Condition 26, you are required to submit the following project compliance certification within thirty (30) days of project completion. [Please check all applicable statements]*

- ☐ I certify that I have completed the project as permitted.
- ☐ I certify that I have completed a modified version of the project.
- ☐ I certify that I have completed all required mitigation.

Permittee's Signature: _____ Date: _____

4. **Other Authorizations.** This determination is applicable only to the permit program administered by the US Army Corps of Engineers. It does not eliminate the need to obtain other Federal, state, tribal, and local approvals before beginning work.

5. **Responsibility.** The permittee is responsible for all work accomplished in accordance with the terms and conditions of this Nationwide Permit. If a contractor or other authorized representative will be accomplishing the work authorized by the Nationwide Permit on your behalf, it is strongly recommended that they be provided a copy of this letter and the attached conditions so that they are aware of the limitations of the Nationwide Permit. Any activity that fails to comply with all the terms and conditions of the Nationwide Permit will be considered unauthorized and subject to appropriate enforcement action.

6. **Other Special Conditions.**

Endangered Species

That the permittee shall report any threatened or endangered species at the project site. Notification shall be made to the North Dakota Regulatory Office by telephone or fax within 24 hours. Written confirmation shall be provided within 48 hours if deemed necessary by the North Dakota Regulatory Office.

Cultural Resources

That the permittee and/or the permittee's contractor, or any of the employees, subcontractors or other persons working in the performance of a contract or contract(s) to complete the work authorized herein, shall cease work immediately and report the discovery of any previously unknown historic or archeological remains to the North Dakota Regulatory Office. Notification shall be by telephone or fax within 24 hours of the discovery and, in writing, within 48 hours. The North Dakota Regulatory Office will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places. Work shall not resume until notified by the North Dakota Regulatory Office.

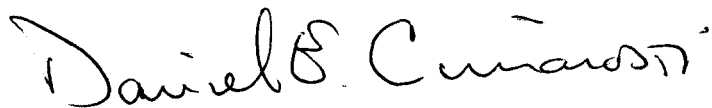
7. **Additional Information.**

Suitable Material and 1978 Stream Evaluation Map: Permittees are reminded that General Condition No. 6 prohibits the use of unsuitable material. In addition, organic debris, some building waste, and materials excessive in fines are not suitable material. Specific verbiage on prohibited materials and the 1978 Stream Evaluation Map for the State of North Dakota can be accessed on the North Dakota Regulatory Office's website at: <https://www.nwo.usace.army.mil/html/od-rnd/ndhome.htm>

The Omaha District, North Dakota Regulatory Office is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete our Customer Service Survey found on our website at <http://per2.nwp.usace.army.mil/survey.html>. If you do not have internet access, you may call and request a paper copy of the survey that you can complete and return to us by mail or fax

8. **Points-of-Contact.** If you have any questions concerning this determination, please contact **Patsy Crooke** of this office by letter or telephone at 701-255-0015 and reference Authorization Number **NWO-2008-2903-BIS**.

Sincerely



Daniel E. Cimarosti
Regulatory Program Manager
North Dakota

Enclosure

**FACT SHEET
NATIONWIDE PERMIT 12
(2007)**

UTILITY LINE ACTIVITIES. Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2 acre of waters of the United States.

Utility lines: This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for the utility lines, in all waters of the United States, provided there is no change in pre-construction contours. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2 acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the total discharge from a single and complete project does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR Part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or

under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP also authorizes temporary structures, fills, and work necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (Sections 10 and 404)

Note 1: Where the proposed utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters), copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, accordance with the requirements for temporary fills.

Note 3: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

General Conditions: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4 and 48.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

17. Endangered Species. (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical

habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at <http://www.fws.gov/> and <http://www.noaa.gov/fisheries.html> respectively.

18. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

X (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address

documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

*Specifically in North Dakota, the North Dakota Department of Health has denied certification for projects under this Nationwide Permit proposed to cross **all classified rivers, tributaries and lakes**; individual certification for project in these waterways must be obtained by the project proponent prior to authorization under this Nationwide Permit. For utility line crossings of all other waters, the Department of Health has issued water quality certification provided the attached Construction and Environmental Disturbance Requirements are followed.*

22. Coastal Zone Management. Not Applicable.

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

26. Compliance Certification. Each permittee who received a NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

- (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;
- (b) A statement that any required mitigation was completed in accordance with the permit conditions; and
- (c) The signature of the permittee certifying the completion of the work and mitigation.

27. Pre-Construction Notification. *See attached pages.*

28. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

Further Information

- 1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
- 2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
- 3. NWPs do not grant any property rights or exclusive privileges.
- 4. NWPs do not authorize any injury to the property or rights of others.
- 5. NWPs do not authorize interference with any existing or proposed Federal project.

General Condition 27. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) Forty five calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

**2007 NATIONWIDE PERMITS
REGIONAL CONDITIONS
STATE OF NORTH DAKOTA
OMAHA DISTRICT – CORPS OF ENGINEERS**

The U.S. Army Corps of Engineers has adopted the following regional conditions for activities authorized by nationwide permits within the State of North Dakota. However, the pre-construction notification requirements defined below are not applicable to Nationwide Permit 47.

1. Wetlands Classified as Fens

All Nationwide Permits, with the exception of 3, 5, 20, 32, 38, 45, and 47, are revoked for use in fens in North Dakota. For nationwide permits 3, 5, 20, 32, 38, and 45 permittees must notify the Corps in accordance with General Condition 27 (Notification) prior to initiating any regulated activity impacting fens in North Dakota.

Fens are wetlands that develop where a relatively constant supply of ground water to the plant rooting zone maintains saturated conditions most of the time. The water chemistry of fens reflects the mineralogy of the surrounding and underlying soils and geological materials. The substrate is carbon-accumulating, ranging from muck to peat to carbonates. These wetlands may be acidic to alkaline, have pH ranging from 3.5 to 8.4 and support a range of vegetation types. Fens may occur on slopes, in depressions, or on flats (i.e., in different hydrogeomorphic classes; after: Brinson 1993).

2. Waters Adjacent to Natural Springs

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 27 (Notification) for regulated activities located within 100 feet of the water source in natural spring areas in North Dakota. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

3. Missouri River, including Lake Sakakawea and Lake Oahe within the State of North Dakota

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 27 (Notification) prior to initiating any regulated activity in the Missouri River, including Lake Sakakawea and Lake Oahe, within the State of North Dakota.

4. Historic Properties

That the permittee and/or the permittee's contractor, or any of the employees, subcontractors or other persons working in the performance of a contract(s) to complete the work authorized herein, shall cease work and report the discovery of any previously unknown historic or archeological remains to the North Dakota Regulatory Office. Notification shall be by telephone or fax within 24 hours of the discovery and in writing within 48 hours. Work shall not resume until the permittee is notified by the North Dakota Regulatory Office.

5. Spawning Condition

That no regulated activity within waters of the United States listed as Class III or higher on the 1978 Stream Evaluation Map for the State of North Dakota or on the North Dakota Game and Fish Department's website as a North Dakota Public Fishing Water shall occur between 15 April and 1 June. No regulated activity within the Red River of the North shall occur between 15 April and 1 July.

Additional Information

Permittees are reminded that General Condition No. 6 prohibits the use of unsuitable material. In addition, organic debris, some building waste, and materials excessive in fines are not suitable material.

Specific verbiage on prohibited materials and the 1978 Stream Evaluation Map for the State of North Dakota can be accessed on the North Dakota Regulatory Office's website at:

<https://www.nwo.usace.army.mil/html/od-rnd/ndhome.htm>



Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there “*may be*” waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

A. Report Completion Date for Preliminary Jurisdictional Determination (JD):

June 30, 2010

B. Name and Address of Person Requesting Preliminary JD:

Grand Forks Air Force Base
ATTN: Mary Giltner, Deputy Base Civil Engineer
319 CES/CD
525 Tuskegee Airmen Blvd
Grand Forks, ND 58205-6434

C. District Office, File Name, and Number:
Omaha, NWO-2008-2903

D. PROJECT LOCATION(S), BACKGROUND INFORMATION, AND WATERS:

State: North Dakota
City: Grand Forks
County: Grand Forks
Name of nearest waterbody: Wetlands

Identify amount of waters in the review area: 3.47

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal:

Non-Tidal:

Table 1 - Waters of the U.S.

Site #	Latitude	Longitude	Stream Flow	Cowardin Class	Estimated amount of aquatic resources in review area	Estimated amount of aquatic resource impact	Class of aquatic resource
1	47.94790	-97.34419		PEM	3.4	.05	Non-tidal
2	47.94770	-97.34000		PEM	.07	.07	Non-tidal

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E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

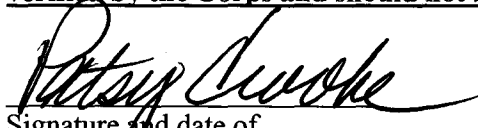
- ☒ Office (Desk) Determination. Date: June 30, 2010
☐ Field Determination. Date(s):

F. SUPPORTING DATA:

Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: GFAPB with application
☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite quad name:USGS 1:24K - Emerado.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: GIS.
☒ National wetlands inventory map(s). Cite name: GIS.
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):Google Earth.
or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Other information (please specify): .

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.


Signature and date of
Regulatory Project Manager
(REQUIRED)

Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining the
signature is impracticable)

G. EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

Legal Review



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 319TH AIR REFUELING WING (AMC)
GRAND FORKS AIR FORCE BASE, NORTH DAKOTA

14 September 2010

MEMORANDUM FOR 319 CES/CEAO

FROM: 319 ARW/JA

SUBJECT: Legal Review – Replace Sanitary Sewer (Building 801) to Lagoons

1. **ISSUE:** Whether the Environmental Assessment (EA), Finding of No Significant Impact (FONSI) and Finding of No Practicable Alternative to Replace Sanitary Sewer (Building 801) to Lagoons at GFAFB are legally sufficient. Proposed EA and FONSI comply with the requirements of 32 CFR Part 989 and are legally sufficient. Proposed FONPA is legally sufficient.

2. **LAW/AFI:** 32 CFR § 989.14 states an EA must discuss the need for the proposed action, reasonable alternatives to the proposed action, the affected environment, the environmental impacts of the proposed action and alternatives (including the "no action" alternative), and a listing of agencies and persons consulted during preparation. The EA meets these requirements and follows the alternatives analysis guidance outlined in 32 CFR 989.8.

If the Air Force determines that no EIS is necessary, it prepares a "Finding of No Significant Impact" (FONSI). The FONSI is a "conclusion" document prepared by the federal agency after completion of an EA that briefly presents the reasons why an action will not have a significant effect on the environment and, therefore, does not require preparation of an EIS.

The following must be discussed in a FONSI:

- A summary of reasons why the action will not have significant impact;
- A summary of the EA if the EA is not attached to and incorporated by reference in the FONSI;
- If necessary, notation of mitigation that will be performed to reduce a potentially significant impact to insignificance, i.e., a "Mitigated FONSI"; and
- Notation of any other environmental documents related to, but not part of the scope of the EA, e.g., an installation's Integrated Natural Resource Management Plan (INRMP).

(40 C.F.R. 1508.13)

A Finding of No Practical Alternative (FONPA) is documentation mandated by Executive Order 11988 and Executive Order 11990. It is important to note the Air Force requires the installation to forward a FONPA to the MAJCOM, along with an unsigned FONSI, when the alternative selected is located in wetlands or floodplains. The FONPA must discuss why no other practical alternative exists to avoid impacts. (See AFI 32-7064, Integrated Natural Resources Management.) Where wetlands or floodplains are affected, a FONPA must be accomplished no matter which document is used to meet the NEPA requirements.

Lastly, If the wetlands could conceivably be characterized as "navigable waters of the United States," then an individual permit must be obtained from the Army Corps of Engineers (or delegated state), -- if a general permit is not available (33 C.F.R. Part 330) -- before any work may take place in the targeted wetland. In this case a Section 404 permit was applied for and approval obtained.

3. **FACTS:** see EA, FONSI and FONPA.

4. **DISCUSSION:** The document I reviewed clearly identifies what transite pipe is being removed and what is not being removed. If this is not properly documented recorded we face a huge liability if the pipe and surrounding fill material find its way to a local playground. This requirement for recording has been documented in the Description of Proposed Alternatives. I am also concerned that the State of North Dakota may change its mind and not permit us to abandon the pipes in place. I recognize that this has not been the past practice at GFAFB but the EA appropriately states we will seek ND State Department of Health approval for the abandonment in place of the pipes. Lastly, ~~although~~ the application for the 404 permit has been submitted. It is my understanding that since the effected acreage of ~~the~~ wetland is less than 1/10th of an acre that GFAFB will not have mitigate under Nationwide Permit # 12. In addition, it is noted that GFAFB will follow the Best Management Practices in the nationwide permit.

5. **RECOMMENDATION/CONCLUSION:** The EA/FONSI and FONPA documentation are legally sufficient.



MARK W. HANSON, GS-12/ DAF
Chief, General Law